MARINE REVIEW.

VOL. XIII. CLEVELAND, O., APRIL 9, 1896. No. 15.

Proposed Names for the Rockefeller Ships.

The REVIEW learns, through an official source, the names proposed for the sixteen vessels of the Bessemer Steamship Co., known as the Rockefeller fleet. The names chosen are those of sixteen eminent benefactors of iron production and commerce in the past. They are as follows:

Sir Henry Bessemer, inventor of the Bessemer process, 1856.

Henry Cort, inventor of the puddling furnace, 1784, and known as the father of the iron trade.

James B. Neilson, inventor of the hot blast in 1828.

James Nasmyth, inventor of the steam hammer in 1842.

Sir William Siemens, inventor of the regenerating furnace and other valued appliances.

Sir Isaac Lothian Bell, important chemical and metallurgical investigations in iron.

Sir William Fairbairn, inventor of tubular steel structure and of iron vessels.

John Ericsson, inventor of the screw propeller, the monitors, etc.

Robert Fulton, inventor of the steamboat.

George Stephenson, inventor of the locomotive.

James Watt, inventor of the steam engine.

Alexander L. Holley, inventor of improvements in Bessemer and other processes.

George H. Corliss, improvements in steam engines.

Alfred Krupp, heavy steel ordnance.

Sir Joseph Whitworth, casting steel under pressure.

John Scott Russell, naval architecture and construction.

Only twelve ships are under construction, and the selection of sixteen names indicates, therefore, that it is the intention of the management of this fleet to change names of the Washburn and Pillsbury, as well as the two whaleback barges which these steamers are to tow. The scheme of naming all the ships of this fleet for men of distinction in the iron industry is pleasing and commendable, but the management may as well take it for granted at the outset that the full names will never be applied to the ships, unless it is in their official papers and in the lettering on bows and sterns. They will be called Bessemer, Siemens, Bell, etc., but not Sir Henry Bessemer, Sir William Siemens or Sir Isaac Lothian Bell. Life is too short and telegraph charges too high in these days to look for the general application of full names to these vessels. Probably it is not the intention of the management to even apply the full names themselves, excepting in government documents. If so, it may be said that the idea of honoring noted men of the iron industry and kindred interests to such a great extent as is carried out here, is new and fitting. The names of Ericsson, Fulton, Watt and others are especially pleasing, and strangely enough there are no other vessels bearing any of these names now in commission on the lakes. Even in the use of only the last names—Bessemer, Cort, Neilson, etc.—there is only one case of conflict with names of vessels already in commission. A small vessel called Belle is owned in Racine, and a lumber barge owned in Saginaw is named Mattie C. Bell. But in the telegraphic reports these would not necessarily cause confusion, although duplication of names should, of course, be avoided as much as possible. It may be noted in conclusion that notwithstanding the list of names proposed for this fleet, there is a preference, of late years, among leading steamship companies and vessel owners for short names that will be easily remembered, and objection to naming vessels for persons while alive.

The number of vessel owners who found time during the past winter to go south on pleasure trips was a little larger than in previous years. As usual, a few of them who made long trips to Cuba and other points were pleased to get home. Capt. E. M. Peck of Detroit was one of a party of excursionists who made one of these long voyages. Immediately upon his return he was met by a Cleveland friend who asked how he enjoyed the voyage. "Very much, indeed," he said, "I would not have missed it for $5,000." And then, after hesitating a moment, he added: "But I would not take it again for ten thousand."

The Mohigan, second of the freight steamers that are being built at Chester, Pa., for service between New York and New London in connection with the Vermont Central Railway, will probably be launched today. Her sistership, the Mowhawk, is now practically ready for service.

The Cunard steamer Lucania has again crossed the Atlantic at an average speed of over 21¼ knots per hour.

Facts Relating to Freights.

There is nothing wild in the claim that eleven and a half to twelve million gross tons of ore may be produced in the Lake Superior mining region during 1896. Such a production is possible. The fact that the association of ore dealers has cut its allotment of Bessemer ores for present sales to about seven and a half millions does not mean that this amount, with probably two to two and a half millions of non-Bessemer will be all that can be produced. A few men in the vessel business who were bold enough, a year ago, to talk of ten million tons being produced in 1895 were ridiculed, and yet the 1895 production aggregated 10,429,037. Steel makers are the great consumers of Lake Superior ores. They are the men who are now expected to first come into the market, when they have arranged certain matters regarding their business, and buy ore at the prices that were fixed some time ago. The strides that have been made in the Bessemer steel industry are almost beyond comprehension. In 1866 there was converted in a small concern in Michigan about 3,000 tons of Bessemer steel. During the next year some 7,000 tons of steel rails were made in the United States. In 1886, twenty years later, the proportions of this industry, although it was still largely confined to steel rails, was thought to be immense, as the product had reached 2,269,190 tons. But this figure was more than doubled in 1895, nine years later, when the production of Bessemer steel aggregated 4,909,128 tons, and the open hearth steel production was in round numbers 1,250,000 tons, or something more than 6,000,000 tons of soft steel in all; and the important feature of all this to the various lake interests is that the states of Pennsylvania, Ohio and Illinois produced about 90 per cent. of this steel

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A year ago the owners of ore mines in the Lake Superior country formed an association and prevented the sale of ore at prices that would certainly result in general demoralization of the iron business. The result was a general stiffening in prices of all iron products and an improved market throughout the year. These ore dealers have held their organization intact and are now demanding prices for ore in which there is some profit. Again their action is recognized as a basis for improved market conditions and the steel manufacturers are endeavoring to follow their example by curbing ruinous competition. This is an indication of willingness to pay the advanced prices for ore, if conditions governing the products of ore can be adjusted so as to warrant higher prices for the raw material. These signs of higher prices in iron and steel are of importance to the vessel owner who is making up his mind about business for the coming season.

A Cleveland vessel owner of very sound judgement advances this argument regarding ore freights: "There is no question," he says, "of $1 a ton being paid on ore from the head of Lake Superior. That rate may be had now, and there is no doubt of plenty of ore to go around at that figure. In fact the dollar rate may be had at any time. Why not wait then for improved conditions. If ore is sold at $4 a ton, the ore dealer who has a liberal profit in his product at that figure will raise the lake freight rather than take chances of paying $1.75 a ton on wild charters later in the season."

Both vesselmen and ore dealers agree that it is not at all probable that the draft of water throughout the lakes during the coming season will be any better than it was in 1895. In fact all calculations regarding the season's business will be based on a draft of water the same as last season or a few inches less. It must be admitted, however, that to the vessel owner who thinks of making season contracts the water question is still a serious problem, as he has no hope of better water and must meet the great disadvantage of lower water.

Although the price of standard Gogebic ore has been fixed by the Cleveland association of ore dealers at $4, as against $3.90 a year ago, it is claimed by some dealers that the average advance in ore of all kinds is not more than 10 per cent. This is one objection that was raised against paying a lake freight now of $1.10 when the rate a year ago was only 80 cents.

It is quite generally understood that the Cleveland Steel Canal Boat Co., which will next season have four canal steamers and fifteen barges in operation between Cleveland and New York, is now a paying enterprise beyond any question. As the company is said to have already concluded engagements that will keep the fleet of nineteen barges fully engaged next season, it will probably not be long until a contract is let for more boats.

Ship Yard Matters.

In addition to the steel steamer Rosemount, now building in England, and which will reach the lakes in June, the Montreal Transportation Co. of Kingston, will have in commission next season a new wooden schooner, the Melrose, which is now nearing completion at the company's ship yard in Kingston. This vessel is 184 feet over all, 35 feet beam and 14 feet depth of hold. She is a three-masted vessel, built in a very substantial manner, and will be equipped with late appliances, including Providence windlass and capstan.

The Duluth & Iron Range Railway Co., which controls the movement of vast quantities of ore from Two Harbors, Minn., will have in the steel tug Edna G, launched at the yard of the Cleveland Ship Building Co. Saturday, the finest craft of her kind on the lakes. The tug sustained some little damage in launching, but the injuries were not serious. This tug will be worth about $40,000 when completed. She is 100 feet over all, 23 feet beam and 13 feet depth, and has engines of 18 and 40 inches cylinder diameters, by 30 inches stroke. Steam will be furnished by a Babcock & Wilcox water tube boiler. The pilot house and quarters forward will be patterned after the houses of seagoing tugs, and the finish and furnishing of the cabin and officers' quarters will be as elaborate as that of the best freight vessel. A tug boat windlass, with iron towing bitts and steam gypsey, will be furnished by the American Ship Windlass Co.

Advices from the ship yard of the American Steel Barge Co., West Superior, are to the effect that about 900 men are now employed, chiefly on the construction of the four new freight vessels, two of which are for Mr. John D. Rockefeller and two for the barge company. About 150 men are engaged on repair work, and the same number on structural iron work and on iron ore spouts for the new Lake Superior shipping docks. It is expected that a breaking up of the ice during the coming week will permit of operations at the dry dock. Quite a few vessels are ready to go into the dock as soon as they can be accommodated. It is unfortunate that on account of the great thickness of ice that forms in Superior harbor it is not available for service during the winter.

Deck plans and a side elevation plan of the new package freight steamer that is being built for the Union Steamboat Co. by the Union Dry Dock Company at Buffalo are reproduced in an engraving that appears on this page. This is not one of the 400-foot type ot ships, as she is intended for package freight business between Chicago and Buffalo, a trade which involves rapid handling of ships in crowded harbors at both ends of the route. In other respects, however, this steamer will be a first class freight carrier, as she will be fitted with triple expansion engines and the latest appliances for rapid handling of freight. She will probably not be ready for service until June.

Around the Lakes.

A contract for releasing the stranded steamer Jim Sheriffs has been let to the Escanaba Towing & Wrecking Co. of Escanaba.

C. F. Bielman of Detroit has contracted with the government to furnish a steam vessel for the Detroit river postal service, at $14.50 a day.

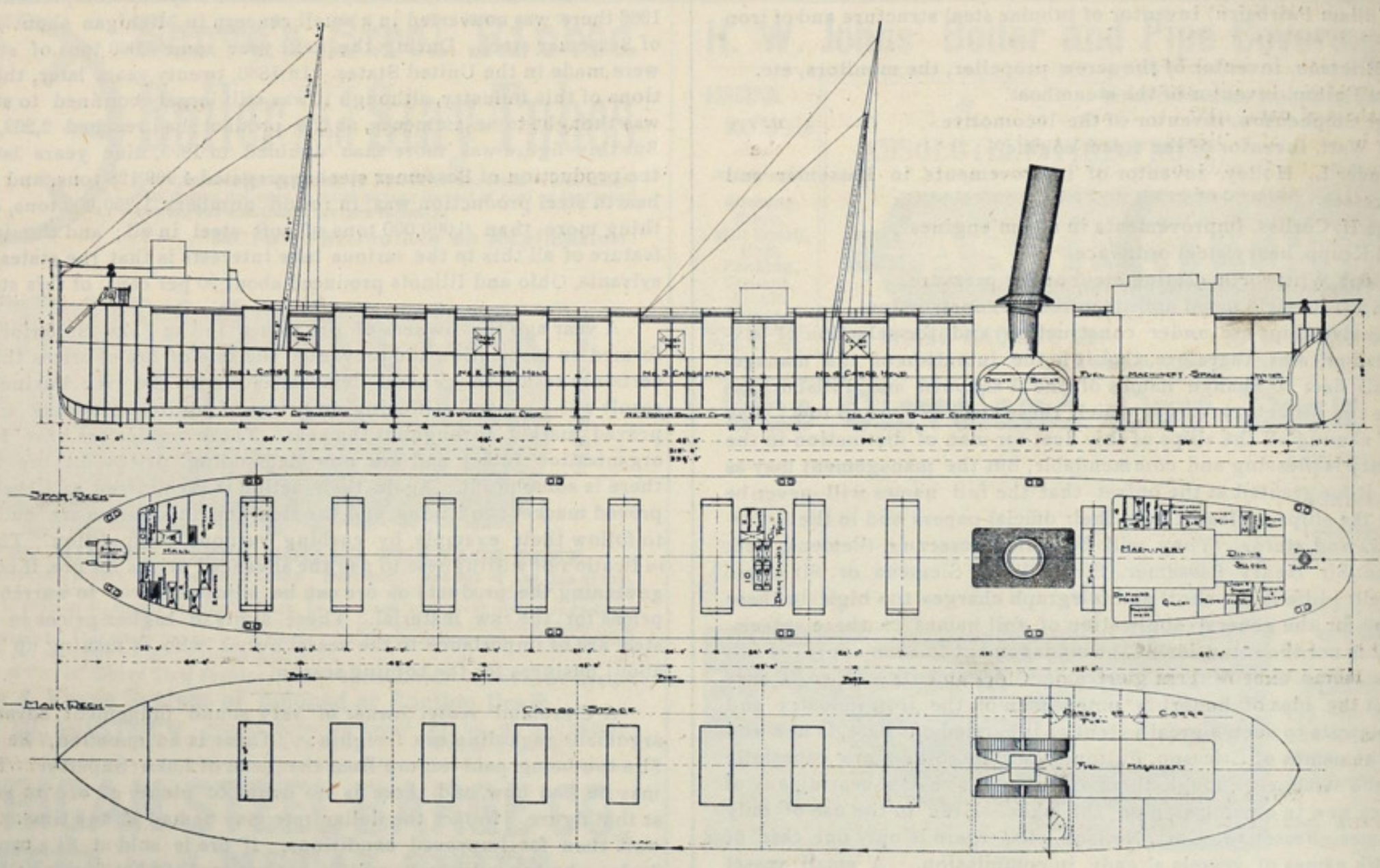
May 1 is the date now fixed for the transfer of the new side-wheel steamer City of Buffalo from the Detroit Dry Dock Co. to her owners, the Cleveland & Buffalo Transit Co.

Capt. Thomas M. Ermatinger, who was born at Sault Ste. Marie sixty-five years ago, and who was an employe at the canal for over forty years, died at his home in that place a few days ago.

Managers of the Buffalo harbor tug companies, who have managed to maintain high towing charges in the past, are said to have agreed upon a reduction for the coming season of 10 per cent. off last season's charges

Horn Bros., Detroit, have almost entirely rebuilt the tug Arthur Jones, recently purchased by them. She now measures 72 feet over all by 16 feet beam; draft 8½ feet. The engine, 18 by 20, was built by S. F. Hodge & Co., who also furnished the propeller wheel.

The side-wheel steamer City of Milwaukee, which has been operated between Milwaukee and Grand Haven by the Grand Trunk Railroad, will next season run between Chicago and St. Joe. She has been chartered by the Graham & Morton Transportation Co.



PLANS OF PACKAGE FREIGHT STEAMER BEING BUILT BY UNION DRY DOCK CO., BUFFALO, FOR UNION STEAMBOAT CO.

Transfers of vessel property: Tug Calumet, Vessel Owners' Towing Co. of Chicago, to Graham & Helmert of Marquette, $5,100; schooner John Jewett, John Stone of Detroit to Theodore Marchand, $1,200; schooner Young America, Grummond estate to James Caldwell of Toledo.

Andrew Glover, Mount Albion, Ont., is another inventor who proposes to raise the steamer Pewabic, sunk near Alpena, Lake Huron, thirty-five years ago with a cargo of copper ore. He has a diving apparatus in which he has great faith, and has written Capt. Geo. P. McKay of Cleveland, who was in command of the Pewabic, for information as to the probable location of the wreck.

The steamer Alcona, Capt. Geo. B. Brock, has been undergoing repairs and improvements, including a fire box boiler that is probably the largest of its kind ever built on the lakes. The boiler was built by the River Machine Works, Cleveland, and is 10 feet 6 inches in diameter, by 17 feet length; allowed 150 pounds pressure.

On preliminary trial the British torpedo boat destroyer Desperate, just completed by the Thornycrofts, has excelled all previous records by attaining a mean speed for four runs on the measured mile of 31.035 knots, or 35¾ statute miles. The Desperate is the first of the boats for which 30 knots was guaranteed.

Opening Carrying Charges.

Representatives of the several ore sales agencies in Cleveland have within the past few days entered into negotiations with furnace men for the sale of ore, but a buying movement has not as yet set in. Various features of the situation are dealt with elsewhere in this issue. One marked feature of the feeling among all vessel owners is the fact that none of them are figuring on what their neighbors may do in the matter of season contracts at $1. They all say that they will not accept the dollar rate, no matter what others may do. As 3 cents is now freely offered on grain out of Duluth for either one or two trips, it is not probable that the wild rate on ore from the head of the lakes will be less than $1. At Escanaba the situation is different. A large fleet in Chicago will tend to weaken the Escanaba rate, and shippers are figuring on getting Escanaba vessels at 55 cents for the first trip. Rates on first trips with coal have settled at 50 cents to Milwaukee and 40 cents to ports at the head of Lake Superior.

Winter Traffic on Lake Michigan.

During the past winter the business of the steamship lines that are operated in connection with railways on both sides of Lake Michigan has been far in excess of all previous winters. The lines did not possess facilities equal to the offerings of freight or the business would have been much larger in volume than it was. No figures are at hand covering the traffic eastward from Manitowoc and Kewaunee, but statistics showing the movement out of Milwaukee will serve to indicate the volume of this winter commerce. For the four months beginning Dec. 1 and ending March 31 the steamers trading to east-shore points carried out of Milwaukee 1,307,261 barrels of flour, 255,874 bushels of wheat, 1,911,329 bushels of oats, 1,128,211 bushels of barley, 5,000 bushels of rye and 24,849 bushels of millfeed. Grand total of grain 3,300,414 bushels. During the month of March alone these steamers carried 391,515 barrels of flour, 1,191,803 bushels of grain and 5,328 tons of millfeed, besides considerable quantities of malt, hay and general products.

Appointments of Masters and Engineers.

Thompson, E. L., Delta Lumber Co., Detroit: Steamers—City of Berlin, Capt. John Buie, Engineer Samuel Braund; Ionia, Capt. Daniel Nelson, Engineer John Bloom; Pahlow, Capt. Daniel Ogden, Engineer John Hartman. Schooner—Delta, Capt. H. H. Schaffer.

Corrigan, James, Cleveland: Steamers—Australasia, Capt. R. C. Pringle; Bulgaria, Capt. J. W. Brion; Caledonia, Capt. A. H. Gain; Italia, Capt. C. H. Kummings. Schooners—Northwest, Capt. William Doudy; Tasmania, Capt. G. G. McElroy. The assignment of Capt. Brion to the Bulgaria and Capt. Gain to the Caledonia is not definitely fixed. These two masters may change places.

McLachlan Transportation Co., Port Huron, Mich.: Steamer—Kittie M. Forbes, Capt. J. L. Bradshaw, Engineer Geo. Smith. Schooner—Mary E. McLachlan, Capt. J. W. Hiesmer.

Kelley Island Lime & Transport Co., Cleveland: Steamer—Albert Y. Gowen, Capt. Charles Smith, Engineer Charles C. Smith.

Jackson, G K., Bay City, Mich.: Steamer—D. Leuty, Capt. ———, Engineer Joseph Badore. Schooner—R. Botsford, Capt. Sharron.

Smith, L. P. & J. A., Cleveland: Steamer—Margaret Olwill, Capt. John F. Brown, Engineer Wheeler. Schooner—Baldwin, Capt. ———.

Berry, W. J., Port Stanley, Ont.: Tugs—A. V. Crawford, Capt. H. Deming, Engineer Robt. Wood; Snowstorm, Capt. A. C. Brown, Engineer Jno. E Brown; Ruby, Capt. Jno. Ellison, Engineer Sam'l McKenzie.

Minneapolis, St. Paul & Buffalo Steamship Co., Buffalo: Steamers—Nebraska, Capt. Peter Thompson, Engineer Joseph Taylor; Geo. H. Dyer, Capt. William Jameison; Engineer G E. Robinson; Geo. J. Gould, Capt. C. M. Cottrell, Engineer Geo. Butler; John Pridgeon, Jr., Capt. D. N. Sherwood, Engineer John Morgan.

Connolly Bros., Buffalo: Steamer—Connolly Bros., Capt. A. King. Schooners—F. B. Gardner, Capt. John Allen; Ogarita, Capt. M. B. Pridgeok.

Rice John, Buffalo: Steamer—R. Mills, Capt. Philip Broderich, Engineer T. F. Patrick.

Fries, Valentine, Shinrock, O.: Steamer—Wm. Edwards, Capt. J M. Johnson, Engineer Moses Blondin. Schooners—Golden Age, Capt. Daniel Stalker; M. W. Paige, Capt. Charles Hubbard; Charles Foster, Capt. John Higgie.

Owen Line, H. H. Clough, Manager, Elyria, O: Steamers—Parks Foster, Capt. Geo. E, Merrett, Engineer Peter Marquox; Ira Owen, Capt. J. Q. Owen, Engineer Hugh Buchanan.

Jones, C. R., & Co., Cleveland: Steamers—New steel steamer building at Detroit, Capt. F. W. Stenton, Engineer P. Whalen; Rhoda Emily, Capt. Geo. McCullagh, Engineer John McLaren; Argonaut, Capt. C. H. Woodford, Engineer F. Craig; Leland, Capt. Jas. Mara, Engineer A. Smith; Argo, Capt. Geo. L. Cottrell, Engineer John Golden; Preston, Capt. Wm. J. Harlow, Engineeer ———; Desmond, Capt. F. L. Hunt, Engineer W. Westbrook. Schooners—Chas. Wall, Capt. James Silverside; Sunshine, Capt. A. Carter; De Wolf, Capt. D. R. Parsons.

Merchants Line, G. E. Jaques & Co., Agents, Hamilton, Ont.: Steamers—Arabian, Capt. Oliver Patenaude, Engineer Walter Scott; Acadia, Capt. John Clifford, Engineer James Brown; Lake Michigan, Capt. J. S. Moore, Engineer J. Belanger; Cuba, Capt. R. Chestnut, Engineer D. L. Foley; Melbourne, Capt. Hy. Chestnut, Engineer Thos. Milne; Ocean, Capt. J. V. Trowell, Engineer A. Ramsay; Persia, Capt. I. H. Scott, Engineer Wm. Kennedy.

Montreal Transportation Co., Kingston, Ont.: Steamers—Active, Capt. John Gaskin, Engineer Geo. Henderson; H. F. Bronson, Capt. Jos. Murray, Engineer R. Hepburn; Glide, Capt. John Doyle, Engineer Geo. Tuttle; Glengarry, Capt. Jas. W. Mawdesley, Engineer Chas. McSorley; Jessie Hall, Capt. Chas. Martin, Engineer Alex Barton; Jas. A. Walker, Capt. John Boyd, Engineer Geo. Boyd; D. G. Thomson, Capt. James Murray, Engineer John Evans; Bannockburn, Capt. A. McMaugh, Engineer H. Thurston. Schooners—Kildonan, Capt. F. Lafrance; Minnedosa, Capt. John Irwin; Selkirk, Capt. Charles Staley; Winnipeg, Capt. John Cornwall; Dunmore, Capt. John Phillips; Melrose, Capt. James Fleming.

Benham, C. E., Cleveland: Steamers—Nahant, Capt. W. P. Benham; Quito, Capt. J. W. Willoughby; H. B. Tuttle, Capt. J. H. McLeod; W. P. Thew, Capt. Ben. Tripp.

Red Star, White Star and Star-Cole Lines, Detroit: Steamers—Greyhound, Capt. B. C. Baker, Engineer M. McMillen; Darius Cole, Capt. W. E. Comer, Engineer W. Dubois; City of Toledo, Capt. Geo. King, Engineer Geo. Curtis; Arundell, Capt. John Stover, Engineer C. H. McCartier; Idlewild, Capt. J. Lockridge, Engineer R. Medear.

Association of Masters and Pilots of Steam Vessels.

Benjamin F. Perkins, grand secretary of the National Association of Masters and Pilots of Steam Vessels, is meeting with unusual success in his work of organizing harbors of this association on the lakes. Members of the Ship Masters' Association are joining the organization quite freely, although they do not intend, of course, to give up membership in the lake body. The harbor in Cleveland, which was organized on Saturday last, and which took over all members of the Lake Pilots Society No. 1, will be known as Cleveland Harbor No. 42. Officers are: Captain, W. A. Collier; first pilot, Alexander McLaughlan; second pilot, Thomas Allen; purser, C. E. Benham; captain's clerk, Lee Brogan. Among the officers appointed by the captain of the harbor are: Chaplain, Samuel W. Gould; starboard quartermasters, Wm. Clendenin and F. Dennis; port quartermasters, H. Carter and Wm. Allen. Mr. Perkins says of the organization:

"It is expected that every port on the lakes will be organized this year in this national association. The insurance features of the organization are very broad and liberal to its members and the amount asked for each assesment is small, only 25 cents at death or disability. The total amount collected from these assessments is paid over to the beneficiary. No salaries are paid to any officers for the management of the insurance. Any member who joins the insurance has the privilege to withdraw at any time by paying up the amount due at the time of withdrawal, but he still retains his membership in the organization. He can also affiliate with the insurance again later on, if he so desires, and receive a renewal of his policy. Any white person twenty-one years of age holding a license issued by the United States inspectors of steam vessels is eligible for membership. Persons holding special license are also accepted. The organization is also desirous of including in its membership owners of vessels, as well as presidents, general managers and superintendents of steamboat or steamship lines who may hold a license. These men give tone to the organization and it is our desire to prove to our employers that we are organized in their interest. By their joining with us we get their good will and influence, and we hope to show them that in the harbors of this organization they can find the best material from which to select officers for their steamers—men upon whom they can rely to protect their property and increase their business.

"We believe that the 600,000 people who travel on steamers during the year will feel more safe when they know that the men who are in charge of steam vessels are skilled in their profession. There is no profession on the face of the earth that carries with it graver responsibilities than that of a master or pilot. He has the care of a great number of lives and a vast amount of valuable property. At times an error of judgment in his calculations migh send many lives into eternity without a moment's warning. But he is not infallible. He is bound, however, to observe ironclad laws and rules which are by no means perfect. But this association hopes and expects, with the aid of congress and the supervising inspectors, to improve these rules so as to make them as near perfect as is possible to have them. The members of this association, who are all of them practical in the profession, believe that they are the proper persons to be consulted when changes are proposed in navigation laws. The association does not in any way interfere in the matter of wages."

The Late George W. Williamson.

George W. Williamson, whose death was announced from Philadelphia recently, was a member of the well-known firm of Williamson Bros., makers of steam steering and hoisting machines. To the people of Philadelphia, Mr. Williamson was known as a prominent citizen of the old district of Kensington, as he was born in that section of the city in 1829 and lived there all his life. His early education was received at the famous old Harrison school in Kensington, where some of the most prominent men of Philadelphia were his schoolmates. Prior to and

at the beginning of the late war Mr. Williamson took quite an active interest in the politics of his district and was a member of the city council of Philadelphia for several terms. After the war be became associated with his two younger brothers, John D. and William C. Williamson, with whom he began the manufacture of hoisting engines. Although not an engineer, his business qualifications had much to do with building up, in combination with the engineering abilities of his brothers, the very large patronage which the firm now enjoys. Williamson Bros. are the pioneer manufacturers of steam steering engines for ships in this country, and their steerers are known everywhere. Their product embraces all kinds of hoisting machines. Mr. Geo. W. Williamson was an important factor in the establishment of this industry, which is a branch of marine engineering. His sudden death is accordingly deplored by a large circle of business acquaintances. He leaves a widow, one daughter and two sons. The eldest of the sons, Geo. W. Williamson, takes an active interest in the management of the firm.

Danger of a Strike at the Ore Mines—Another Problem.

A most serious question regarding the coming season's business on the lakes, that of a strike in the Lake Superior iron mining region, seems to receive little attention publicly from either ore dealers or vessel owners. It is well known, however, that the ore men have discussed this matter very earnestly. But this probability of labor trouble can not prevent the present efforts to sell ore and to close up freight contracts. There is reason to expect shortly a tie up of all branches of the ore mining and shipping industry in Minnesota and Wisconsin, as well as the upper Michigan peninsula. For several months labor leaders in the mining districts have been organizing mine workers of all kinds, and a general meeting is to be held next week, at which it is expected preparations will be made to ask for higher wages and probably to demand an eight-hour work day. All of the mines have been accumulating large stock piles, but the labor organizations may be expected to oppose the movement of this ore that has been gotten out of the mines with even more force than they will use in trying to suspend further mining operations. Altogether it is quite certain that a sharp struggle will take place. The mine managers may make some advances in wages, but it is not probable that they will meet the demands of the organization which now seeks to rule labor matters generally in the mining districts. It is claimed that common labor at the mines, which might have been had at 80 and 90 cents a day during the late period of great depression in the ore business, is not now receiving less than $1.30 a day, and that all kinds of labor has, with two advances since the depression, been raised accordingly. A protracted strike in the Lake Superior mines during the navigation season would have an important bearing on vessel matters.

Stocks of Grain at Lake Ports.

The following table, prepared from reports of the Chicago board of trade, shows the stocks of wheat and corn in store in regular elevators at the principal points of accumulation on the lakes on April 4, 1896:

	Wheat, bushels.	Corn, bushels.
Chicago	17,673,000	6,468,000
Duluth	13,932,000	143,000
Milwaukee	417,000	.....
Detroit	251,000	12,000
Toledo	626,000	937,000
Buffalo	1,092,000	85,000
Total	33,991,000	7,645,000

As compared with a week ago, the above figures show at the several points named a decrease of 454,000 bushels of wheat and an increase of 473,000 bushels of corn.

On April 4, there was afloat at Chicago 1,093,000 bushels of wheat, 317,000 bushels of corn and 1,296,000 bushels of oats; at Buffalo, 65,000 bushels of wheat, and 106,000 bushels of oats; at Duluth, 512,000 bushels of wheat, and at Milwaukee 176,000 bushels of wheat and 280,000 bushels of oats.

Valentine Fries of Shinrock, O., who owns the steamer Golden Age and schooners Marion W. Page and Charles Foster, was in Cleveland a few days ago arranging a few matters regarding his vessels for next season. Mr. Fries makes little fuss over the management of these vessels, although they made up the largest tow on the lakes before big steel vessels were brought into service. H. J. Webb & Co., vessel brokers of Cleveland, look after freight for these ships and they are given great latitude in the management of them. Mr. Fries decides certain matters regarding the vessels about once a year and leaves the rest to his agents. This does not mean, however, that he is not progressive. He has large interests, but does not take much worry to himself on account of them. Some years ago he found himself in failing health on account of close attention to a mercantile business in which he was engaged in Cleveland, and moved to a farm near Milan, O. He is of the opinion that it will not be long until steel vessels of 500 feet length will be built for the lake trade. Mr. Fries is a large stockholder in the Ship Owners' Dry Dock Co. in Cleveland, and he was one of the directors of that company who insisted from the outset upon big dimensions for the docks. The value to his foresight in this regard is proven by the fact that the company's plant, although among the largest on the lakes, is not now as large as they would like to have it.

Although there is already in existence a commission of engineers appointed by Canada and the United States to report jointly on the subject of routes for a 20-foot ship-canal from the lakes to the Atlantic seaboard, Mr. Hepburn, representative in congress from Iowa, has lately introduced a bill directing the president to appoint a commission before June of five persons to survey a route from either Lake Erie, Lake Ontario or the St. Lawrence for a canal 28 feet deep. According to the bill, the commission is to report next December with surveys, estimates, etc. They are to ascertain also the cost of deepening and widening the Erie canal. Army engineers may be appointed. Civilians are to receive $500 a month and expenses, but the army officers are to get only expenses and regular salaries. The bill carries an appropriation of $60,000 for expenses.

"Jenkins' standard '96" is the name selected for a new joint packing, which Jenkins Bros., well-known manufacturers of valves and packing, are now offering for sale. This firm is the originator of unvulcanized joint packing. In a letter to the REVIEW regarding this latest special article in mechanical rubber goods they say: "In accordance with our aim to always manufacture a high grade of goods, we have been experimenting for some time in order to obtain a joint packing that would fulfill all requirements. We think we have done so with what we call our new "Jenkins' '96," and from the reports received from prominent engineers and steam fitters who have given this new packing a trial, we feel proud of knowing that not a fault can be found with it. While we have not changed the good qualities of our old Jenkins packing, we have added to its efficiency. The improvement consists in manufacturing a packing suitable for any and all pressures of steam, that will not rot, burn, blow or squeeze out under any condition. Furthermore, we have obtained a result which we believe no other manufacturer of packing has yet obtained, and that is a packing that has all the above advantages and which will last for years in a joint. In fact, it will last as long as the metal itself will last and can be broken and used again and again. We are very well aware that this is a broad statement to make, but we nevertheless stake our reputation upon it."

A Letter from Mr. Geo. Uhler.

Editor MARINE REVIEW: I am somewhat surprised, and very much annoyed, to read in your issue of the 2nd inst an article that criticises very severely "the action lately of some of the officers of the association of engineers," in endeavoring to bring to a successful issue the question now before congress, looking to the definite establishment of the status of marine engineers, and that on account of these actions "the chances of passage of a law of this kind are being jeopardized." You then go on to say: "If there is no legislation on the subject in the present congress they can blame their own officers for trying to get too much." For the life of me, I can not understand what you mean, and as I am the only representative of this organization that has anything to do with this legislation at the present time, I would be obliged to you if you will enlighten me as to what actions you refer, as you certainly must be in possession of some very strong evidence to justify such a sweeping assertion as you present in the article that will be read by hundreds of our members on the lakes, and that has already been read by thousands to whom I am personally known, and whose confidence in me will not be strengthened by your article.

I am already in receipt of telegrams from Chicago, New York and other points asking me what this means, and I am just this minute in receipt of a letter enclosing the clipping of the article from your paper, and asking me what I have to say, and in my present position I trust that you will appreciate my feelings, and enlighten me if possible, as to the object of the article, and the actions that justified its publication. The methods that have obtained in our efforts to have some favorable legislation upon the measures that have presented themselves to congress for consideration in our behalf, have met with the hearty approval of all the members of the organization that I have the distinguished honor to represent, and I feel that they still have confidence in my ability to direct such legislation as may be necessary for our relief, but at the same time I must take decided exceptions to the tone of your article, to which I have referred, and I sincerely trust that you will give me some good reason why you have published such a scathing rebuke to the officers of this organization.

GEO. UHLER,
National President.

Office of the President,
National Marine Engineers' Beneficial Association,
Philadelphia, Pa., April 16, 1896.

Readers of the REVIEW will probably bear us out in saying that the article to which Mr. Uhler refers, and which appeared on page 12 of our last issue, contains "no scathing rebuke to the officers of the organization of marine engineers." An honest criticism of the manner in which the engineer measures now before congress have been handled was all that was intended. We did not know that Mr. Uhler was the only representative of the engineers who has to do with this legislation at present, and the statement that officers of the organization were over-zealous in trying to secure too much in the proposed engineer law was not directed to Mr. Uhler alone. The spirit of his letter would indicate, however, that he is of that opinion, and that he also suspects an attempt to do him a personal injury. Such is not the case. From all that is known outside the association of engineers, Mr. Uhler is a capable and honest chief official of that organization. But if we are of the opinion that a mistake has been made in Washington by anyone who happens to be in charge of legislation in which the whole country is interested, we see no objection to our saying so, especially if we have lent support to the main features of such legislation as in this case. With a full knowledge of all the conditions surrounding the bills that have been before both houses of congress, Mr. Uhler may be piloting this legislation on a safe course, but it would certainly seem that the passage of a bill in the house that contains provisions not approved by the senate committee on commerce, thus creating a necessity for a conference committee, is incurring delay that is not desirable when the session is drawing to a close.

Full Summary of River and Harbor Appropriations.

A full summary of appropriations in the river and harbor bill pertaining to works on the lakes has been made from the bill as it passed the house of representatives on Monday last and is presented herewith. Only two other items pertaining to river and harbor work have been passed by the house. These are in the sundry civil appropriation bill. An appropriation of $500,000 is made in the sundry civil bill for the 20-foot channel, and there is also an item in that bill providing $27,000 for surveys and for other work necessary in the printing and issuing of charts by officers of the army engineer corps connected with the office of the late Gen. Poe in Detroit.

The important feature of the present river and harbor bill is the number of works that have been placed under the continuous contract system. Improvements at Chicago, Cleveland, Buffalo and several other points on the lakes will receive continuous appropriations in future. The bill carries in actual appropriations $10,330,560, and authorizes contracts for thirty-two new projects with a limit of cost of $51,721,210. It is not at all probable that the senate will cut down any of the appropriations, but some additions may be made to the bill in that body. Following are the items relating to works on the lakes:

Lake Ontario—Charlotte, $12,000; Wilson, $5,000; Great Sodus Bay $8,000; Little Sodus Bay, $8,000; Ogdensburg, $20,000; Oswego, $60,000; Putneyville, $1,500; Cape Vincent, $25,000.

Lake Erie—Buffalo, extending breakwater southerly to Stony Point, $35,000, with provision for continuous contracts involving $2,200,000; Dunkirk, $10,000, with provision for continuous contracts involving $398,258; Tonawanda and Niagara river to north line of village of North Tonawanda, $50,000; Erie, resurvey out of money heretofore appropriated; Ashtabula, $50,000, not less than $40,000 of which is for breakwater; Lorain, $20,000, and survey for more extensive improvements; Cleveland, $80,000, with provision for continuous contracts involving $1,354,000, and also survey with a view to determining advisability of changing present plan of breakwater, so as to extend eastern arm eastwardly in a general direction parallel with the shore; Fairport, $30,000, of which $20,000 is for breakwater; Huron, $8,000; Port Clinton, $6,000; Sandusky, $40,000, and survey of bar at mouth of harbor with a view to securing permanent navigable channel next to Cedar point; Toledo, straight channel and harbor, $150,000; Vermillion, $4,000; Conneaut, $40,000, of which $20,000 is for breakwater; Monroe, $5,000.

Lake Huron—Sand Beach, $16,000; Alpena, $2,500.

Lake Michigan—Michigan City, $80,000 for outer and inner harbor; Calumet harbor, Chicago, $75,000; Waukegan, $20,000; Charlevoix, $20,000; Frankfort, $15,000; Grand Haven, $20,000; Manistee, $12,000; Holland, $8,000; Muskegon, $30,000; Pentwater, $5,000; Benton Harbor canal, and harbor at St. Joseph, $30,000; South Haven, $15,000; White Lake, $5,000; Ludington, $20,000; Petoskey, $8,000; Saugatuck, $10,000; Menominee, $7,150; Cheboygan, $12,000; Ahnapee, $5,000; Green Bay, $25,000, of which $5,000 may be expended on Fox river; Kenosha, $24,000; Manitowoc, $24,500; Milwaukee, harbor of refuge, $20,000, with provision for continuing contracts involving $168,737.91; Milwaukee harbor, $7,000; Port Washington, $5,500; Racine, $27,000; Two Rivers, $5,000; Sheboygan, $26,000; Sturgeon Bay canal, harbor of refuge, $5,000; Oconto, $4,000; Pensaukee, $1,000; Sturgeon Bay and Lake Michigan ship-canal, $30,000; South Milwaukee, $5,000; Kewannee, $25,000.

Lake Superior—Ontonagon, $10,000; Portage lake, $25,000; Marquette, $24,000; Presque Isle point, near Marquette, harbor of refuge, $20,000; Ashland, $27,000; Duluth and Superior harbors, $50,000, of which $30,000 is for Duluth portion and $20,000 for Superior portion, with provision for continuing contracts involving $3,080,553; Grand Marais, Minn., $3,000; Agate Bay, $30,000; Grand Marais, Mich., harbor of refuge, $24,000.

Connecting rivers and rivers tributary to the lakes: Chicago river from its mouth to stock yards on south branch and Belmont avenue on north branch, $50,000, with provision for continuous contracts involving $650,000 for 16 feet navigation; Calumet river, Illinois, from mouth to forks, $50,000; Illinois river, $40,000; Illinois and Mississippi canal, $25,000, with provision for continuous contracts involving $5,710,960; Pine river, Michigan, $5,000; Black river, Michigan, $4,000; Black river at Port Huron, $4,000; Clinton river, Michigan, $10,000; Rouge river, Michigan, $5,000; Detroit river, shoals from Detroit to Lake Erie, $30,000; water communication across Keweenaw point, Michigan, $50,000, with provision for continuous contracts involving $1,065,000; St. Joseph river, Michigan, $500; Kalamazoo river, Michigan, Lake Michigan to Saugatuck, $5,000; Menominee river, Wisconsin and Michigan, $15,000; Belle river, Michigan, $5,000; Sebewaing river, Michigan, $5,000; Saginaw river, Michigan, $50,000, of which $16,000 is to be expended above Bay City, and also provision for several surveys with a view to securing a channel 200 feet wide and 14 to 16 feet deep in navigable parts of the river; Niagara river, New York, from Tonawanda to Port Day, $15,000.

A correspondent of the Army and Navy Journal pays a compliment in the last issue of that publication to Col. Jared Smith of the United States engineer corps, who is in charge of river and harbor works and the engineering portion of the light-house service at Cleveland and other points on Lake Erie. He says: "Col. Smith has saved and does save the government thousands of dollars by his ceaseless care for and personal attention to the multifarious public works under his charge, making use of and inventing improved methods of construction for cribs, for piers, breakwaters, foundations for light-houses and beacons, and in the building of light-houses and signals. As a gentleman and citizen he has no peer. His gentle, patient courtesy, generous kindness, just and honorable treatment, have won the respect, friendship, good will and gratitude of every person, whether business men or employes, who have had the good fortune to come in contact or transact business with him during his long, honorable and most useful army service."

The charter of the steamer I. W. Nicholas to the Anchor Line at $1 per net ton, free of shortage and breakage, for carrying package freight, mostly flour, from the head of Lake Superior next season, is regarded as a fairly profitable transaction.

MARINE REVIEW

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

Published every Thursday at No. 516 Perry-Payne building, Cleveland, O

SUBSCRIPTION—$2.00 per year in advance. Single copies 10 cents each. Convenient binders sent, post paid, 75 cents. Advertising rates on application.

The books of the United States treasury department on June 30, 1895, contained the names of 3,342 vessels, of 1,241,459.14 gross tons register in the lake trade. The number of steam vessels of 1,000 gross tons, and over that amount, on the lakes on June 30, 1894, was 359 and their aggregate gross tonnage 634,467.84; the number of vessels of this class owned in all other parts of the country on the same date was 316 and their tonnage 642,-642.50, so that half of the best steamships in all the United States are owned on the lakes. The classification of the entire lake fleet on June 30, 1895, was as follows:

Class.	Number.	Gross Tonnage.
Steam vessels	1,755	857,735.00
Sailing vessels	1,100	300,642.00
Unrigged	487	83,082.00
Total	3,342	1,241,459.00

The gross registered tonnage of vessels built on the lakes during the past five years, according to the reports of the United States commissioner of navigation, is as follows:

	Number.	Net Tonnage.
Year ending June 30, 1891	204	111,856.45
" " " 1892	169	45,168.98
" " " 1893	175	99,271.24
" " " 1894	106	41,984.61
" " " 1895	93	36,353.00
Total	747	334,634.28

ST. MARY'S FALLS AND SUEZ CANAL TRAFFIC.

(From Official Reports of Canal Officers.)

	St. Mary's Falls Canal.			Suez Canal.		
	1895.*	1894.	1893.	1895.	1894.	1893.
No. vessel pass'ges	17,956	14,491	12,008	3,434	3,352	3,341
T'n'ge, net registd	16,806,781	13,110,366	9,849,754	8,448,383	8,039,175	7,659,068
Days of Navigat'n	231	234	219	365	365	365

* 1895 figures include traffic of Canadian canal at Sault Ste. Marie, which was about ½ per cent. of the whole, but largely in American vessels.

Entered at Cleveland Post Office as Second-class Mail Matter.

NO RAFTING regulations were incorporated in the river and harbor bill, and it is now quite certain that after all the fight that has been made by vessel owners, there will be no legislation on this subject in the present congress. Congressmen who were depended upon to look after the rafting regulations in the river and harbor bill were not inclined to insist upon the regulations being included in the bill, on account of a fear of jeopardizing appropriations, and now there is little probability of even the introduction of a separate measure. If vessel owners regard this rafting question of as much importance as they did some time ago, it would seem that the details of legislation regarding it have been neglected.

THESE are certainly days of combinations in the iron business, but if they work out rightly lake vessel owners will have nothing to complain of, as the aim of all of them is to hold production within bounds and thus create a stability of market conditions. Great surplus stocks and wild fluctuations in prices are disastrous to all interests concerned in the iron industry. It is said that the combination of manufacturers of soft steel is as strong as that of the ore mining companies. They have fixed upon $20.25 and $21.25 as prices of billets in Pittsburg and Chicago respectively. A pool of Bessemer pig iron makers would now seem in order.

"DON'T grow weary Willie while we're wiggling well," was the wording of a telegram received by Capt. Wm. S. Mack from Harvey D. Goulder, who went to Washington, Tuesday, to look after the Detroit river bridge bill for the vessel interests. Capt. Mack had just returned to Cleveland from Washington, where he had found sentiment in the bridge matter somewhat against the vessel interests. Mr. Goulder, upon reaching the capital, was probably not inclined to look upon the bridge question with feelings quite as dismal as those of his predecessors.

ALTHOUGH the Rockefeller fleet of sixteen ships—twelve building and four purchased recently—will be capable of carrying about 1,150,000 gross tons of ore from Lake Superior in 1897, it is not probable that this fleet will move, during the season now about to open, more than 500,000 tons, so that their influence in freight matters this year is not of great importance. The completion of new ships for this fleet will be delayed longer than was expected when contracts were let.

LAKE SUPERIOR mining companies that produce non-Bessemer ore are still engaged in an effort to follow the example of the Bessemer producers and effect a combination covering prices and output. The matter is yet in a preliminary stage, and the problem seems more difficult than that of the Bessemer producers, not so much on account of a complication of intereats involved as the matter of price for a material that can be produced in quantities far in excess of the demand.

THE quarterly dividend of 1¼ per cent—first in about three years—which the Minnesota Iron Co. will pay on April 15, will involve the distribution of $247,500 to stockholders. The authorized capital of the company is $20,000,000, in shares of $100 each, of which $16,500,000 is paid up.

THE most complete and interesting account of the Cuban situation that we have as yet seen is that written by Murat Halstead for the April Review of Reviews. The same number contains a sketch of Mr. Halstead by Albert Shaw.

Trial by Jury in Admiralty Cases.

The United States district courts are occasionally asked to submit admiralty cases to a jury. With the rapid growth of personal injury litigation, demands for trial by jury will undoubtedly be more frequent, owing to the mistaken notion that the function of a jury in the admiralty court is the same as that of common law juries. In cases coming squarely within the statute, trial by jury may be demanded as a matter of right, but in any admiralty case its verdict is merely advisory, and the court is at perfect liberty to disregard it. Its only function is to "enlighten" the conscience of the court, but considering the technical and complicated character of most admiralty cases, it is thought by some that nautical assessors would fulfill this function with more even justice.

The history of trial by jury in such cases is peculiar and interesting. Under the judiciary act of 1789, the jurisdiction in admiralty was thought to be limited to waters affected by tides. This left the great lakes and their connecting tributary waters without any admiralty jurisdiction. In 1845 an act was passed extending the jurisdiction to these waters, and in that act, to meet the constitutional right of trial by jury, it was provided, "saving, however, to the parties the right of trial by jury of all facts put in issue in such suits, when either party shall require it." This was not intended to be a grant of a new right, but a reservation of a supposed right which congress was without authority to deny.

In 1854 (Genesee Chief, 12 How., 443), the supreme court held that the jurisdiction in admiralty was not limited to tidewater, but extended to these waters without reference to the act of 1845; that that act was not necessary to confer jurisdiction; and later (1868, the Eagle, 8 Wallace, 15), the same court held that it was "inoperative and ineffectual as a grant of jurisdiction," and the logical conclusion would seem to be that the reservation of right to trial by jury in such cases must have fallen with that decision. But the court said: "We must, therefore, regard it as obsolete and of no effect, with the exception of the clause which gives to either party the right of trial by jury when requested, which is rather a mode of exercising jurisdiction than any substantial part of it." The revisors of the statutes, mistaking the reservation of a supposed pre-existing right for a positive grant, and the unfortunate language of Mr. Justice Nelson above quoted as sanctioning such right, retained that portion of the act of 1845, and it now appears in the revised statutes in the following greatly modified form:

Sec. 565 * * * "In causes of admiralty and maritime jurisdiction relating to any matter of contract or tort arising upon or concerning any vessel of twenty tons burden or upward, enrolled and licensed for the coasting trade, and at the time employed in the business of commerce and navigation between places in different states and territories upon the lakes and navigable waters connecting the lakes, the trial of issues of facts shall be by jury when either party requires it."

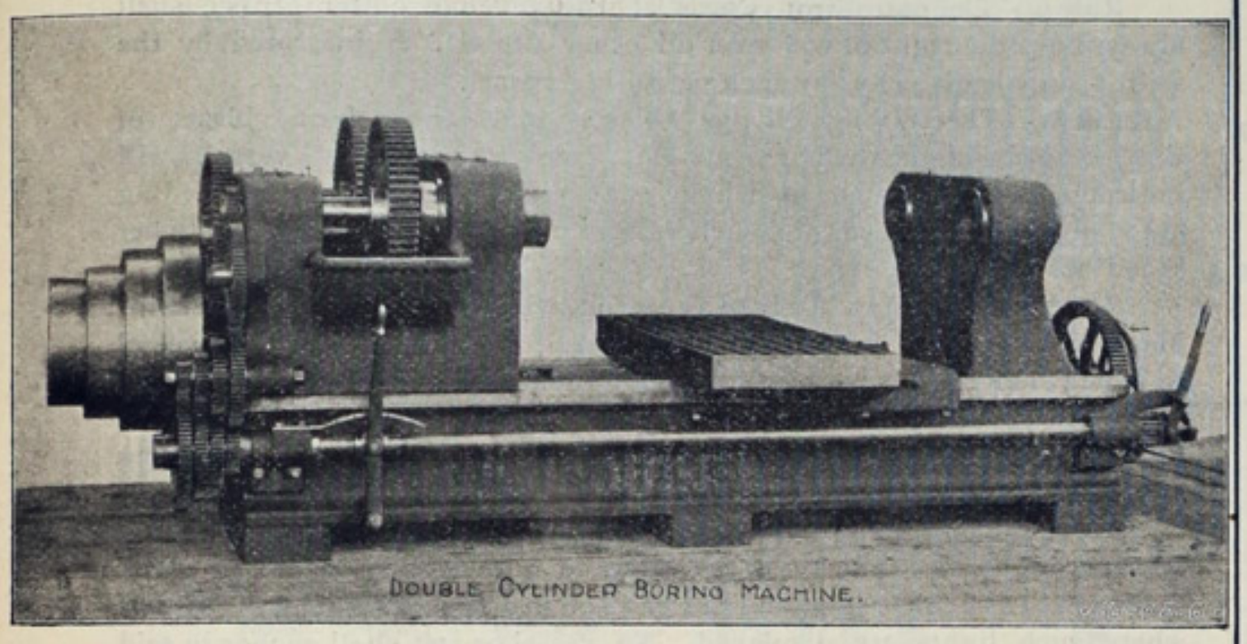
It will thus be seen that the right extends only to a portion of the cases arising in the admiralty courts; that it is restricted in its operation to the lakes and connecting waters; and that one vessel may be within its provisions and the other not, in which case the lovely hodge-podge of one side of the case being submitted to the jury and the other to the court would be found. These are only part of the incongruities mentioned by Judge Lonyear in reviewing the law some years ago, and it is undoubtedly in view of these that the courts look upon such trial with disfavor, and insist in each case that the parties bring themselves entirely within the statute.

In its present form, Judge Longyear characterized it as "a mere excrescence upon the jurisdiction of the admiralty courts," and recommended that the attention of congress be speedily called to it, so that it be repealed or made general and uniform, and provision made for review of such cases. This was in 1875, and so far as our knowledge extends no step has yet been taken to correct its inequalities.

The Welland Canal will not be open for navigation before May 1.

Double Cylinder Boring Machine.

This machine is designed for rapidly boring two cylinders at once. It is peculiarly useful in works where a large number of cylinders of the same or nearly the same size are to be bored. The machine is usually made with a bed 11½ feet long fitted with a head stock carrying two heavy spindles 5 inches to 9 inches in diameter, with bearings adjustable for wear, placed with their centers 31 inches apart horizontally. These spindles are driven by a 30-inch cone pulley with four steps for 5-inch belt geared fifteen times. The boring bars are inserted in these spindles



DOUBLE CYLINDER BORING MACHINE.

and have their outer ends supported in a double tail stock fitted with removable bushing and ajustable upon the bed

The work table is 66 inches by 42 inches, which dimensions, however, can be varied when required. The table traverses by hand or power 45 inches upon bed. It has four automatic feeds from $\frac{1}{32}$ to ¼ of an inch. These feeds can be changed at slight expense to any desired figures and the bed can be lengthened or shortened, within reasonable limits, to suit requirements. From the top of the table to the center of the spindle is 19 inches and the bed is 5 inches below the top of the table.

The total swing over the bed is 48 inches and over the table 38 inches. This special machine has been designed by Messrs. Bement, Miles & Co. of Philadelphia. It is particularly useful in shops where large numbers of small cylinders are being manufactured. One of these machines has lately been installed in shops where they are manufacturing air compressors, rock drills and similar work. It has proven in this connection very efficient and satisfactory.

Hull Insurance Tariff.

In the last issue of the REVIEW there was printed the tabulated statements of insurance rates on hulls for 1896. The printed tariff, which has since been issued, contains rules regarding deductions, additions, etc., as follows:

Deductions—Deduct for double bottom steel vessels when sheathed with at least 5 inches of hardwood, 10 per cent.; for total loss and general average only, all vessels, 25 per cent.; for total loss, actual and constructive only, all vessels, 30 per cent.; for excepted fire risk on steam craft, pro rata of 1 per cent. Deductions for general loss and general average, or total loss, are to be made after deducting for fire risk if excepted. Deduct for harbor tugs with lake privilege to the extent of 20 miles, 1 per cent.

Additions—Add for wrecking privileges on tugs 1 per cent. Where full wrecking privileges are not desired polices may be endorsed "permission to wreck for ¼ per cent. additional for each service rendered to Oct. 1 and thereafter at ½ per cent for each service rendered." Add for seven-eighth collision clause with $500 average, 1 per cent.; for agreement to make loss or damage by fire to be settled on conditions of special clause for season, 50 cents; with deductions for time expired and cancellations as noted below, or for the year, 75 cents, this clause to be attached to such marine policies only as include fire risk.

Fire and collision only—A 1 and A 1½ steamers fire and collision done and sustained, $1.75.

For fire policies only: Steamers—A 1 and A 1½, 1 per cent per annum, with 80 per cent. clause; A 2 and A 2½, 1½ per cent. per annum, with 80 per cent. clause; B 1, 2 per cent. per annum, with 80 per cent. clause. Tugs—Coal burners only, 1½ per cent. per annum, with 80 per cent. clause, which latter is obligatory in all cases.

Excluded from tariff—Passenger steamers navigating one lake only are excluded from the operations of the marine portion of this tariff.

Suspensions for a A 2 class and below—An allowance may be made of 6 per cent. of the ex-fire season rate for each thirty consecutive days when a vessel is laid up in port during the life of this policy, but it is obligatory on the part of the assured to give written notice to the company of said suspension, the policy to remain suspended until written notice is given the company to reinstate the policy. This rebate, however, is not to be allowed while the vessel is subject to or undergoing repairs, the expense of which is participated in by the insurance companies.

Rules—No allowance or deduction shall be made for portions of months expired except as noted below. No more than six months credit on premiums, and all notes must mature on or before Nov. 1 on season risks; discount for cash at the rate of 6 per cent. per annum.

Extensions—On steel and A 1 and A 1½ wooden steamers 2 per cent. of premium paid per day after Dec. 10 to complete voyage, providing steamer is at sea noon of Dec. 7. On A 1 and A 1½ sail and tow barges 4 per cent. of premium paid per day after Dec. 1 to complete voyage, if at sea noon of Nov. 30. On A 2 and below, the charge for steam vessels is to be 2 per cent., and on sail vessels and tow barges 4 per cent. of the season rate per day on the form of policy issued, provided vessels are at sea noon of Nov. 30. Such extensions to be for five days from noon of Dec. 1, provided application be made for such extensions before noon of Dec. 1. A further extension may be granted from noon of Dec. 6 on steamers only, and only for the purpose of completing an unfinished voyage commenced prior to noon of Nov. 30. The charge for such extension shall be 5 per cent. of the full season rate per day, on form of policy originally issued. The classification of Inland Loyd's and Canadian Loyd's registers for 1896 is to govern as to class and value of all vessels, and on A 1 and A 1½ steamers and A 1 sail the value in policy is not to be less than 80 per cent. of the valuation in the register, and not to exceed register valuation; on A 2 steam craft and below, and A 1½ sail barges and below, and all tugs, the value in policy is not to exceed 90 per cent. of the valuation in the register nor to be below 80 per cent.

Deductions—Up to Sept. 1 a deduction to be allowed for each and every five days, until the policy attaches, of 1 per cent. of the full season rate. The last six days of any month of thirty-one days shall be considered five days only. For risks not attaching until Oct. 1, 40 per cent. of season rate; for risks not attaching until Nov. 1, 55 per cent. of season rate. No deduction for partially expired months of September, October and November.

Cancellations—For each 10 days in April covered and unused, 3 per cent. of season rate; May, 2½; June, 2½; July, 2½; August, 2½; September, 4; October, 5; November, 6; December, 1 cent per $100; January, 1 cent per $100; February, 1 cent per $100; March 1 cent per 100. The last eleven days of calendar months of thirty-one days to be considered as ten days only. In figuring under the head of "deductions" and "cancellations," the season rate on steel hulls to be considered the yearly rate less ¼ per cent., and on A 1 and A 1½ wooden hulls, less ½ per cent. If policy is cancelled before running one month, no return premium to be allowed for any portion of the said month.

Statistics Relative to Coal Freights.

In view of the general attention that is being given just now to the question of lake freights for the coming season, the accompanying table of coal shipments to Lake Superior has been prepared from the army engineer reports of St. Mary's Falls canal traffic:

Season of	Soft Coal, net tons.	Hard Coal, net tons.	Total net tons.
1895	2,133 885	440,477	2,574,362
1894	2,264,314	532,870	2,797,184
Total	4,398,199	973,347	5,371,546

This table shows that there was shipped to Lake Superior ports in 1894 2,797,184 net tons of coal, hard and soft, while the movement in 1895 aggregated 2,574,362 tons, or a decrease of 222,822 tons. When navigation opened in the spring of 1895 there was on dock at Lake Superior ports a surplus of about 500,000 tons of coal. It is estimated now that the surplus when navigation opens in about a fortnight will not be more than 100,000 tons. If we add therefore the 1894 surplus of 500,000 tons to the shipments of 1895 (2,574,362 tons) we have a total of 3,074,362 tons, from which there is to be deducted the surplus of 100,000 tons now on hand, leaving 2,974,362 tons as the consumption during the year ending with the present month. If consumption during the coming year is to be even equal to that of the past, it would follow that shipments during the coming season must exceed those of 1895 by 400,000 tons, which is the difference between 2,974,362 (consumption during the year ending May 1, 1895) and 2,571,362 (shipments in the season of 1895).

Some time ago the REVIEW suggested to Commander Sigsbee, U. S. N., who is in charge of the United States hydrographic office, that a table giving distances in statute miles between the numerous ports on the lakes would prove valuable aboard lake vessels as well as in the offices of companies managing them. Tables of this kind have been prepared in the past but there has always been some question as to their reliability and none of them were complete. The hydrographic office has now issued a chart of convenient size giving distances between 119 lake ports. It sells at 50 cents and may be had from the MARINE REVIEW, 409 Perry-Payne building, Cleveland.

Regulations for Navigation of St. Mary's River.

As a result of a conference held in Washington a few days ago between officials of the revenue marine service, treasury department, and a committee consisting of Captains Mack, Mallory, Morton and Greenley of Cleveland, representing the Lake Carries' Association and the Ship Masters' Association, the following rules for the navigation of the St. Mary's river were prepared. A law has just been passed by congress giving the secretary power to regulate the Sault river traffic and to detail vessels from the revenue cutter service to enforce such rules as may be agreed upon. The rules printed herewith are not official, as they are still under consideration in the treasury department and may undergo some revision, but they embody very fully the ideas of the committee of captains referred to above.

SPEED LIMIT BOUND UP.

RULE 1.—Steamers passing through the dredged channel from the can buoy on Mud lake to the float lights at the north end of the 20-foot channel going into Hay lake shall not run at a speed faster than seven miles an hour (passing the land), and upon the approach of another steamer from an opposite direction, it shall be the duty of each steamer to check when at a distance of half a mile from each other to a slower speed, till each has passed the other.

From the crib lights at the south end of the 20-foot channel through the Little Rapids cut at the north end of Hay lake, to the government pier at Sault Ste. Marie, a speed of seven miles an hour only shall be maintained; except that as before, when meeting another steamer coming from the opposite direction, each shall check when at a distance of half a mile from each other, until both have passed each other.

Exception is also made for the provision hereinafter made about slow-going craft in what is known as Little Mud lake and from the can buoy to Everens' point. The speed of seven miles an hour shall be the limit of speed from the upper end of St. Marys Falls canal piers to a point abreast of Big point, one mile west of Vidal shoal buoy.

SPEED LIMIT, BOUND DOWN.

RULE 2.—From Big point, one mile west of Vidal shoal buoy, all steamers bound down must slow down to a speed not exceeding seven miles an hour, until reaching the canal piers. After getting under way from Sault St. Marie the limit or maximum speed of seven miles an hour shall be maintained only till the crib lights at the south end of the 20-foot channel, through Little Rapids Cut in the north end of Hay lake is reached; but as before noted, when steamers or other craft are meeting, both shall check down to a slower speed until they have passed each other. The seven-mile speed rule shall apply again from the float lights at the north entrance to the dredged channel, lower end of Hay lake, to the can buoy in Mud lake.

REGULATIONS OTHER THAN SPEED, UP BOUND.

RULE 3.—In ascending the St. Mary's river no steamer shall approach another steamer, bound up, nearer than one-half mile, while between the can buoy in Mud lake and the northern float lights in the north end of the 20-foot channel at the southern end of Hay lake. This rule shall apply also between the crib lights at the south end of the 20-foot channel, going through the Little Rapids cut, north end of Hay lake, and the government dock at Sault Ste. Marie; and again from the canal piers at the west end to Big point, one mile west of Vidal shoal.

This rule shall be strictly enforced, except in cases where a very slow tow is going up—so slow as to be unable to keep up the speed limit in such cases at these places, namely, from the can buoy in Mud lake to Everens' point, and also between the black buoy, No. 13, and the northern float lights going into the 20-foot channel at Harwood's point. (This is commonly called Little Mud lake).

A slow tow must, on being given the usual signal in such cases from the overtaking boat, answer said signal and immediately check down and lay over as far as possible to allow the overtaking boat to pass. The overtaking boat must also check and pass slowly, and it shall be obligatory on the passing boat to pass at least 500 feet from the boat or boats that are being passed.

In Hay lake the faster boats may pass slower ones, but they must not pass either a steamer or consort any closer than 500 feet, and the slower boat must give the faster ones all the opportunity they can to allow the faster boats to pass in safety. Should the slower boat cut across or crowd the passing boat, this shall be considered an act liable to a fine.

REGULATIONS OTHER THAN SPEED, BOUND DOWN.

RULE 4.—No steamer descending the St. Mary's river from what is known as Big point, one mile west, south-west from Vidal shoal buoy, to the west end of the St. Mary's Falls canal piers, shall approach nearer than one-half mile to another steamer. After getting under way from Sault Ste. Marie, no steamer shall approach any closer to another steamer bound down than one-half mile, until the crib lights at the south end of the 20-foot channel through Little Rapids cut, at the north end of Hay lake, is reached. And from the float lights at the north end of the 20-foot channel at the lower end of Hay lake to the can buoy in Mud lake, no steamer shall approach another going in the same direction nearer than one-half mile. But in Hay lake steamers may pass slower-going craft, either a single steamer or tow, by strictly following the rule that they must not pass any closer than 500 feet from the slower boats.

GENERAL REGULATIONS.

RULE 5.—Special attention is called to Rule 24, of the act of Congress, approved Feb. 8, 1895, giving the right of way to the descending vessel in the St. Marys river.

Rule 6.—The patrolling vessels of the revenue cutter service shall always have the right of way over all other vessels, as indicated by the sailing signals given by any such patrolling vessel.

RULE 7.—Three long distinct blasts and two short blasts of the steam whistle, when sounded from a patrolling vessel, will indicate that the vessel to which such signal is given, is proceeding at too high rate of speed, and such vessel must immediately moderate her speed accordingly.

RULE 8.—Two long blasts of the steam whistle followed by two short blasts when sounded from a patrolling vessel, will indicate that the vessel to which such signals is given must stop immediately and remain stationary, when bound up; when bound down, as near to a stop as is prudent to safely navigate in the current, until further orders from the patrolling vessel.

RULE 9.—Two red lanterns, one over the other, hoisted on a prtrolling vessel at night, will indicate to the vessel to which such signal is given that such vessel must stop, and not proceed further towards the position where such lights are displayed. No vessel or raft shall anchor in said river between Everens' point and the float lights at the north end of the 20-foot channel leading from the Neebish channel to Hay lake, nor between the crib lights at the entrance of the upper 20-foot cut and Little Rapid channel and the crib lights at the northern entrance of Hay Lake channels, except when in distress or during a fog, and any vessel so anchored must always shift her anchorage when directed by the officer in charge of a patrolling vessel to the place designated by such officer.

RULE 10.—Vessels navigating the St. Mary's river may anchor between Point Detour and Mud Lake turning buoy and at Sailors' Encampment, close to the wharves of the saw mill in Hay Lake, between the Neebish and Little Rapid channels, but outside of the channel as indicated by the ranges, but nothing in this rule shall be construed to prohibit any vessel from lying alongside of any wharf in said river.

RULE 11.—Rafts being towed in the St. Mary's river will be required to use what is termed the "old channel." From Harwood point to Mud lake turning buoy they will move at the time designated by the officer in charge of the patrolling vessel. When lying by they must be anchored out of the channel.

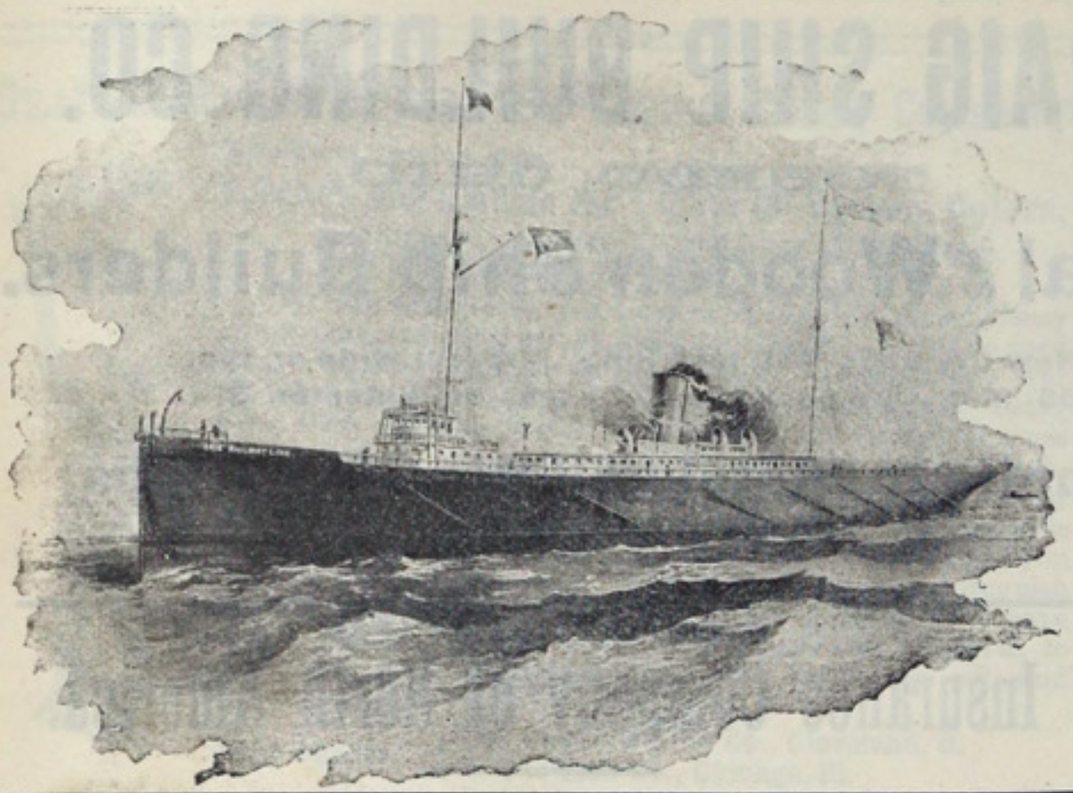
RULE 12.—In navigating the St. Mary's river, in all cases where the foregoing rules are not applicable, the attention of masters and pilots is called to the sailing rules contained in the act of congress, Feb. 8, 1895.

RULE 13.—All vessels navigating the St. Mary's river in passing dredges and vessels at work on improvements to the channel, will be required to slacken their speed upon such dredge or other vessel engaged in such improvement giving the signals of three distinct blasts of the steam whistle.

RULE 14.—The pilot of every steamer descending the St. Mary's river, shall, when abreast of the black buoy at Rains' shoal, and before passing around the bend of said river at Sailors' Encampment, give a signal of one blast of the steam whistle of ten seconds duration, which signal shall be answered by a blast of the steam whistle of the same duration by any steamer ascending said river within hearing. The pilot of every steamer ascending said river not having heard auch signals from a descending steamer, shall, when abreast of Everens' point, and before passing around the bend of said river at Sailors' Encampment, give a signal of one blast of the steam whistle of ten seconds' duration, which shall be answered by a steam whistle of the same duration by any vessel descending said river within hearing. After such signal of one blast of the steam whistle of ten seconds shall have been given and answered the usual passing signal must be given.

The Manufacturers advertising bureau, Benj. R. Western proprietor, which has been located for a number of years at No. 111 Liberty street, New York city, will remove about April 15 to more commodious quarters at No. 126 Liberty street. This concern is unique as an advertising agency. It takes entire charge of newspaper work for manufacturers. The bureau is credited with being the largest user of trade journal advertising space in the United States.

The Mahoning Valley Iron Co. writes the Empire Boiler Cleaning Co., Cleveland, Alex C. Bates, agent, as follows: "Yours of Dec. 20 at hand. Our furnace has been out of blast since Jan. 5, but we will state that your compound has fully come up to our expectations for the time we have been using it. It is by far the best compound we have ever used. You have our permission to use this letter."



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Pockets and Chutes arranged for different types of vessels.

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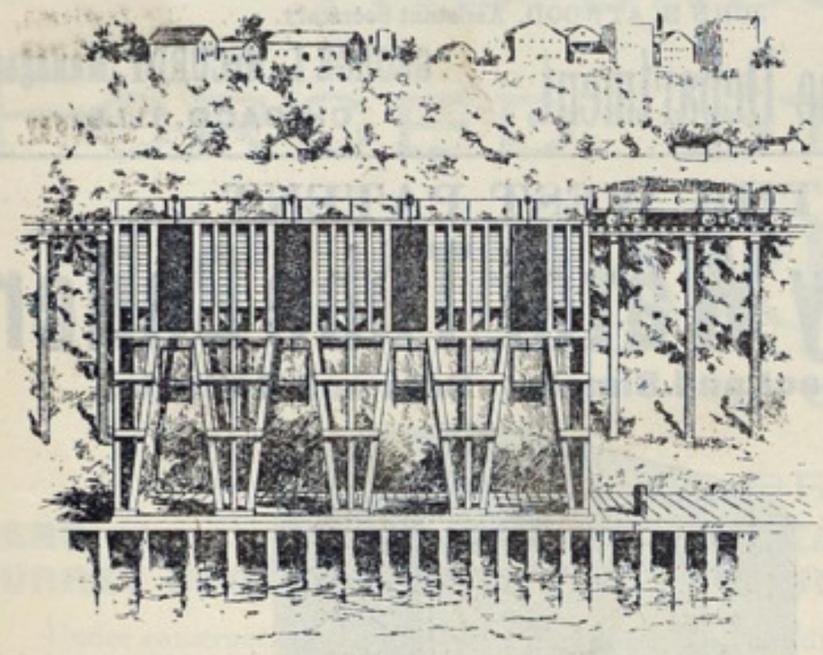

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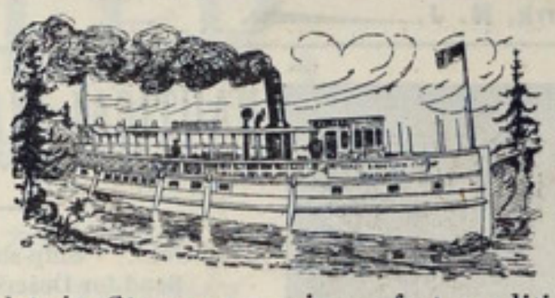
By reason of the dissolution of the firm of Murphy. Conlan & Company, of Buffalo, N. Y., this boat will be sold by the undersigned at public sale, at her mooring in Erie Basin, Buffalo, N. Y., on the 15th day of April, 1896, at 2 o'clock in the afternoon.

She is 140 feet over all, 31 feet beam and 10 feet depth of hold; tonnage of 299; licensed capacity for 1,000 passengers, and a speed of 16 miles an hour. Equipped with one 650 H.P. fore-and-aft compound engine, 18x36, with 27 inch stroke; 9x16 foot marine boiler. Full electric lighting plant, with 256 H.P. engine, 259 light dynamo, together with 4 metallic life-boats, 2 metallic life-rafts, 1,000 life-preservers, bar, soda fountain, etc., and all equipage, furnishings, and tackle. Built spring of 1892, and in excellent condition. For terms of sale and further information, address,

JOSEPH G. DUDLEY. Owner's Agent, 35 Dun Bldg., Buffalo, N.Y.

For Sale.



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Length 80 ft. Beam 19 ft. Draft 3 ft. 8 in (light). Built in 1891 for lake and river navigation. Original cost $19,000—will be sold cheap (no trade). A good thing with business for the right man. Call on or address

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The tug Henry—Cylinders, 16½x18; new steel boiler; steel boiler house; hull in first-class condition. This is a most favorable opportunity to procure a first-class tug for dredging outfit. For particulars apply to **WILLIAM TRUBY,**

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U. S. ENGINEER OFFICE, Telephone Building, Detroit, Mich., April 4, 1896. Sealed proposals for dredging at several of the harbors on East shore of Lake Michigan, between Charlevoix and Muskegon, Mich, will be received here until 12 o'clock M. (Standard time), April 25, 1896, and then publicly opened. Apply here for information. G. J. LYDECKER, Lt. Col., Engrs.

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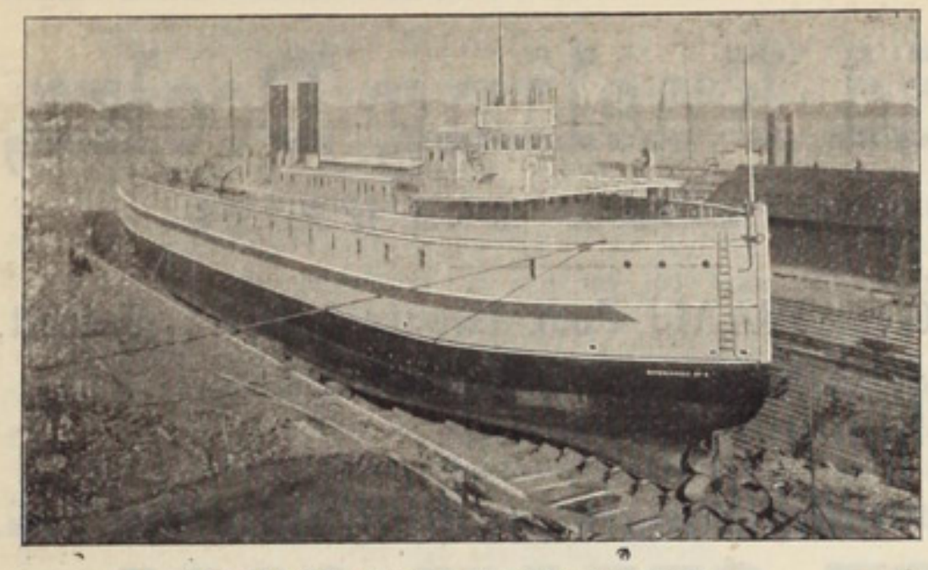

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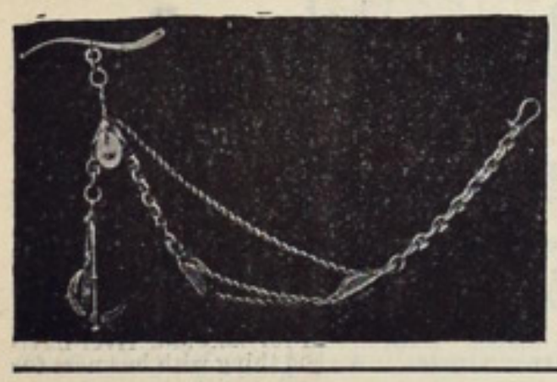

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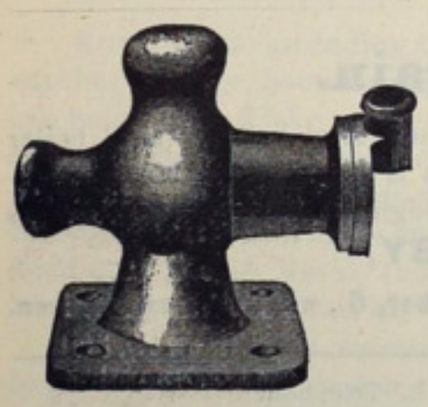

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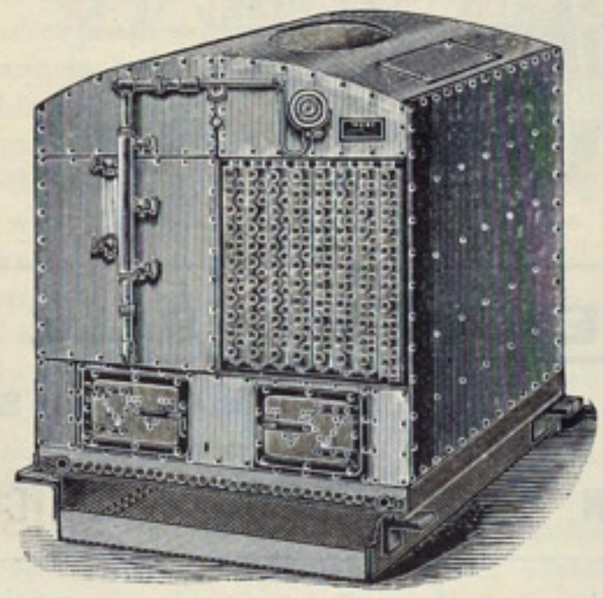

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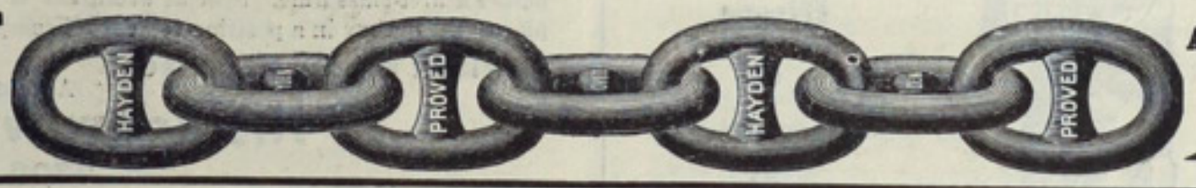

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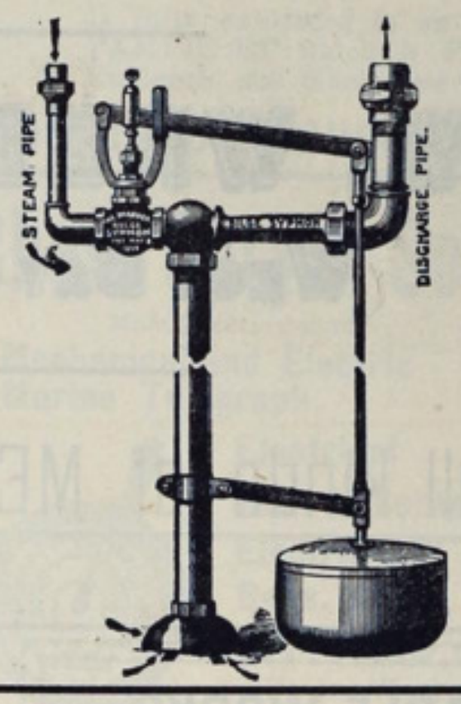

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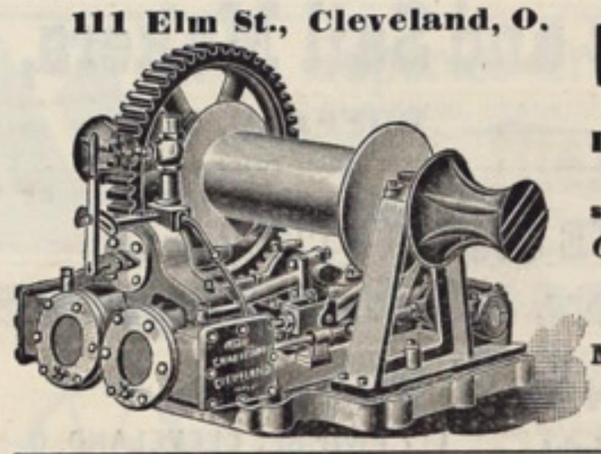

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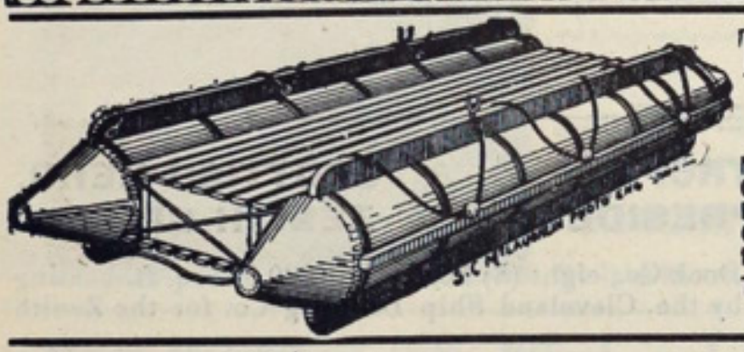

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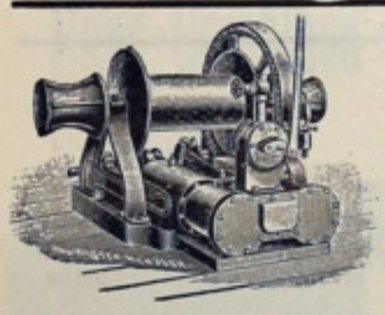

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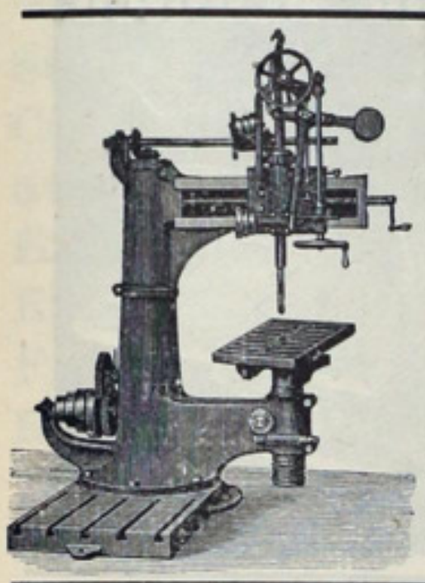

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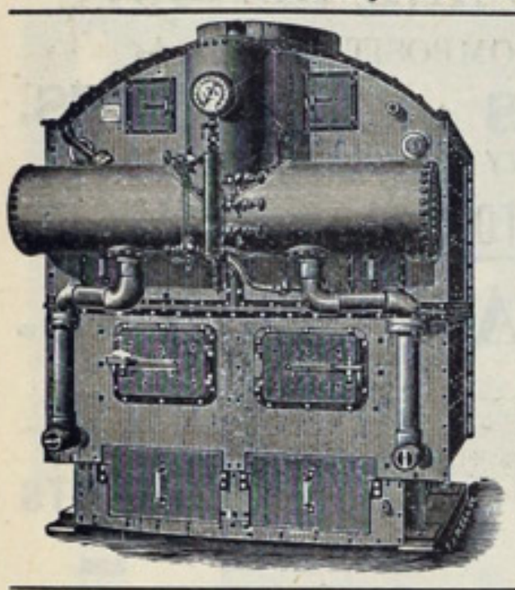

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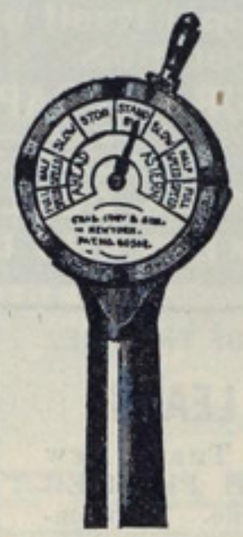

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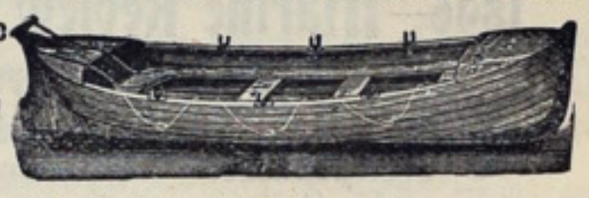

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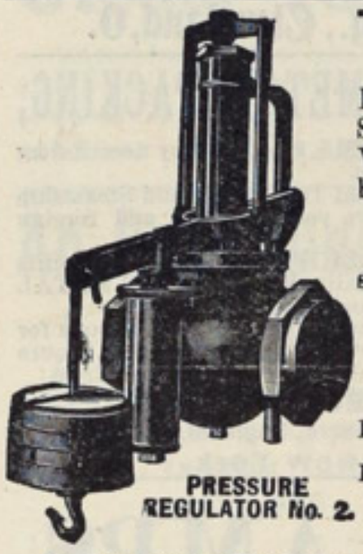

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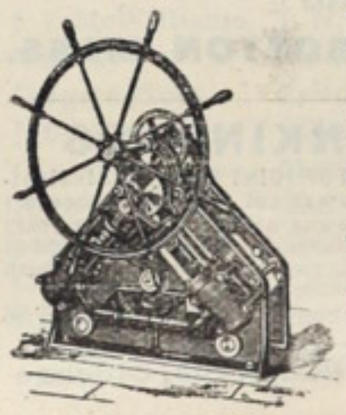

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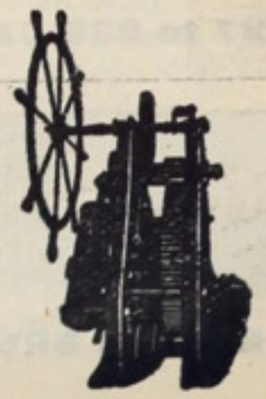

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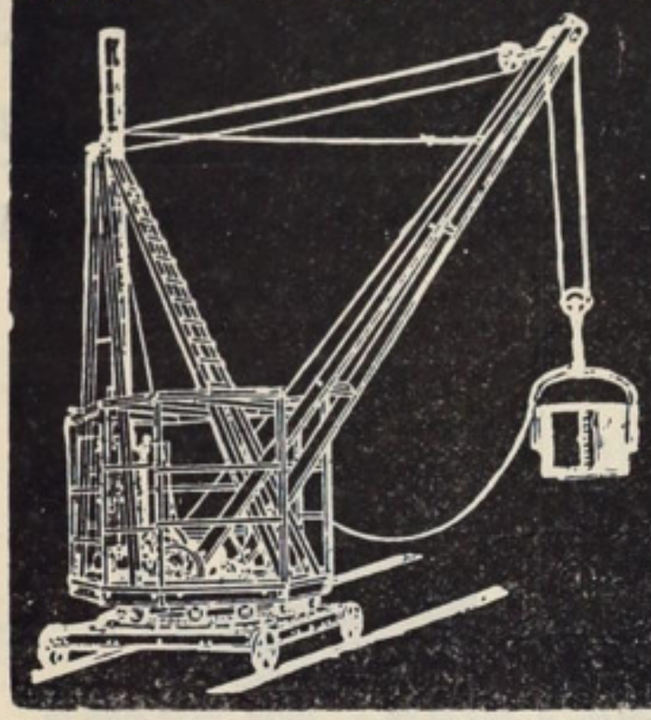

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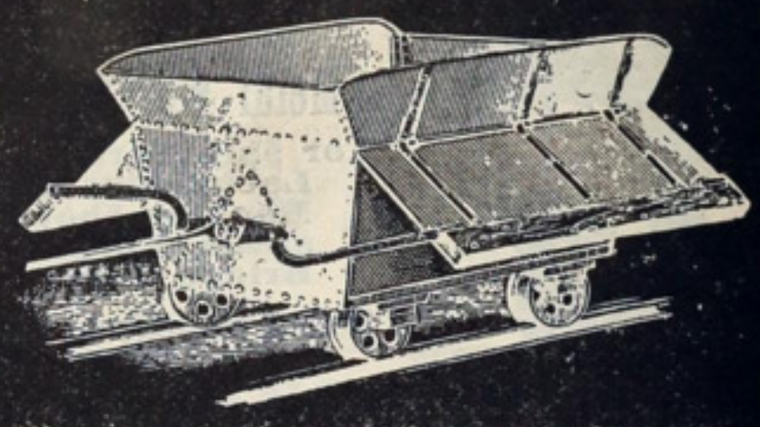

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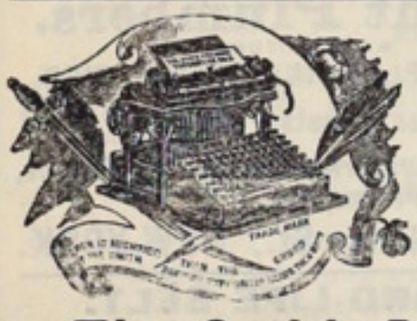

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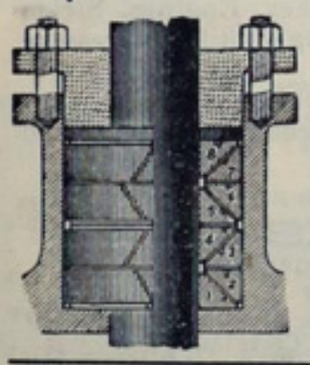

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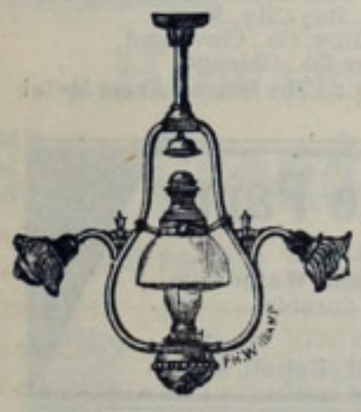

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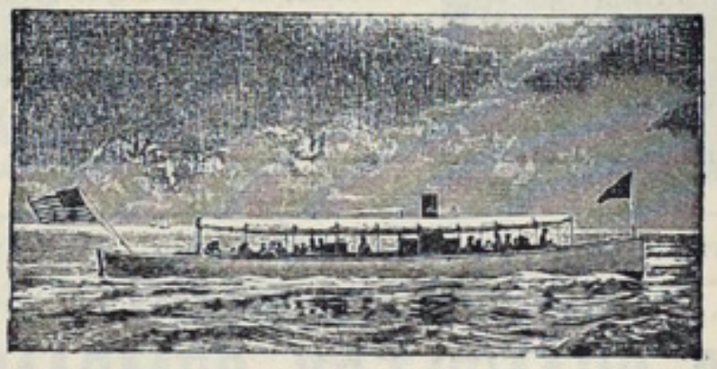

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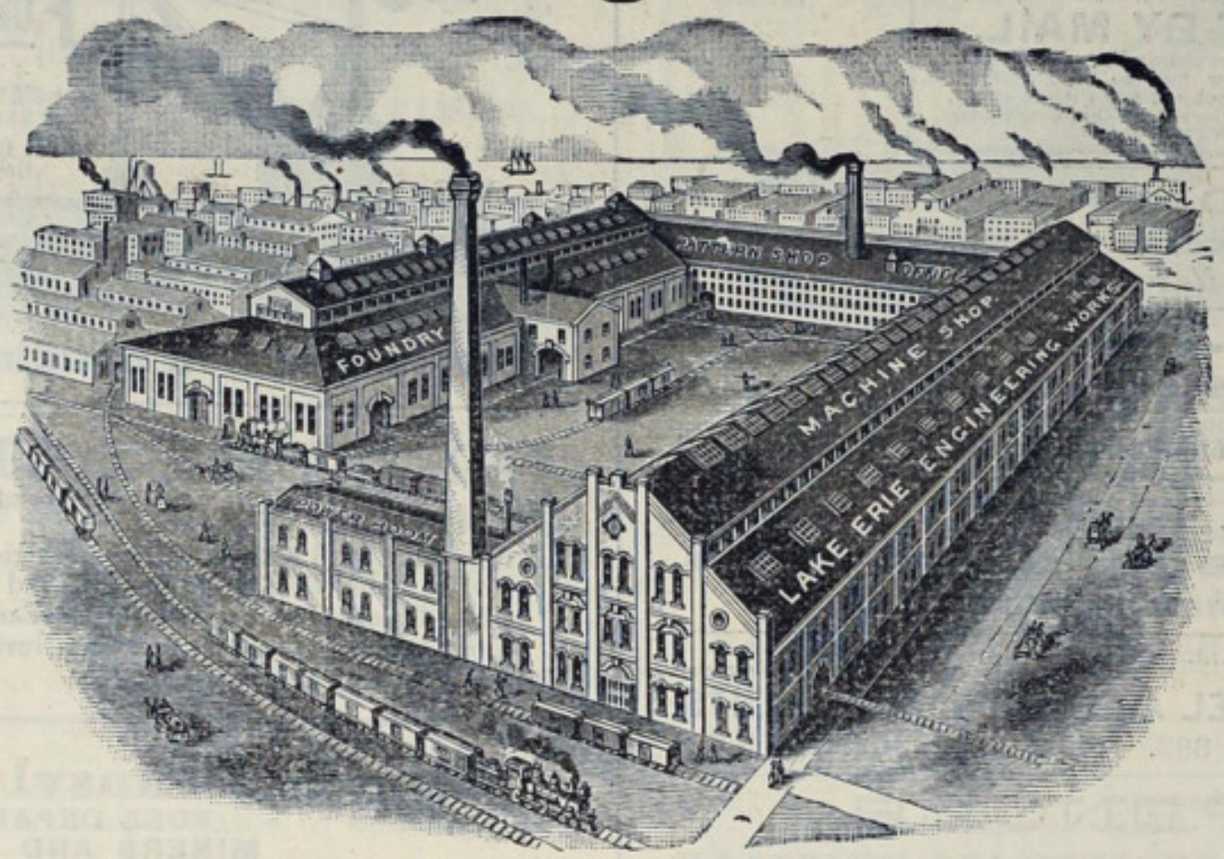

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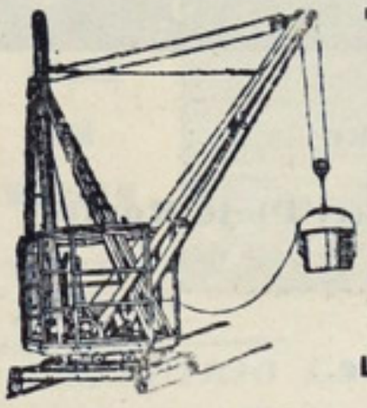

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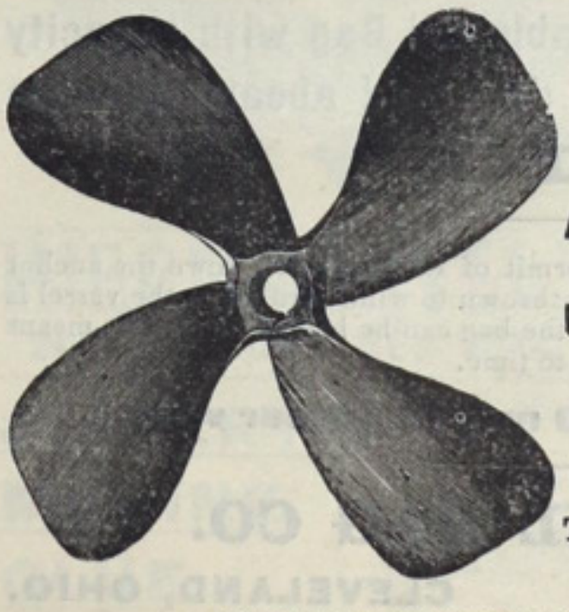

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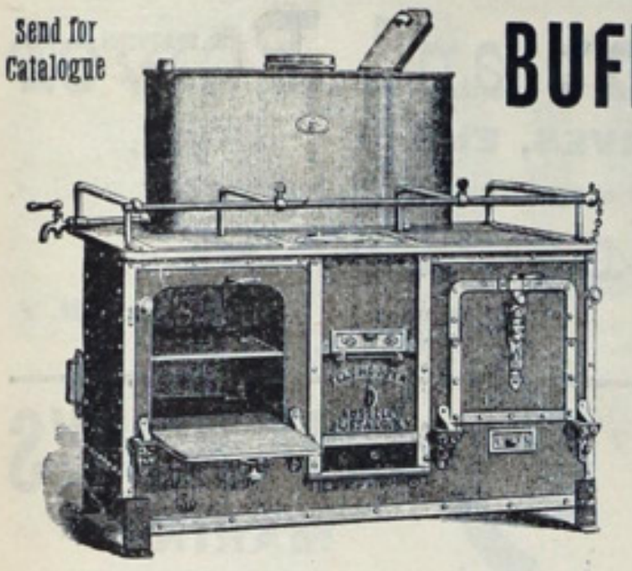

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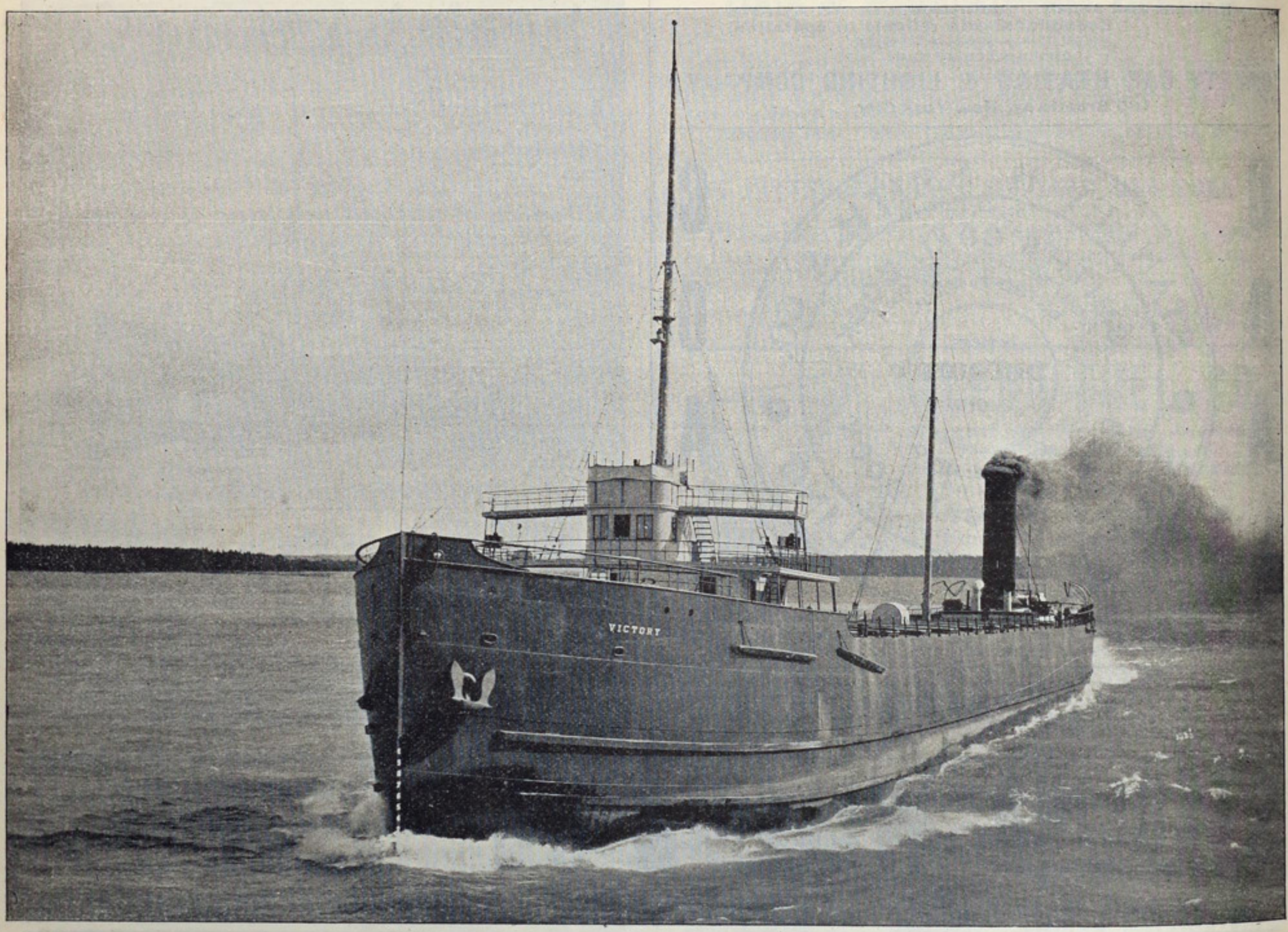

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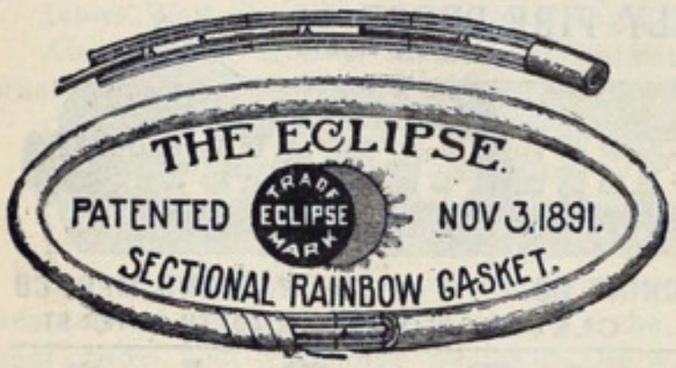

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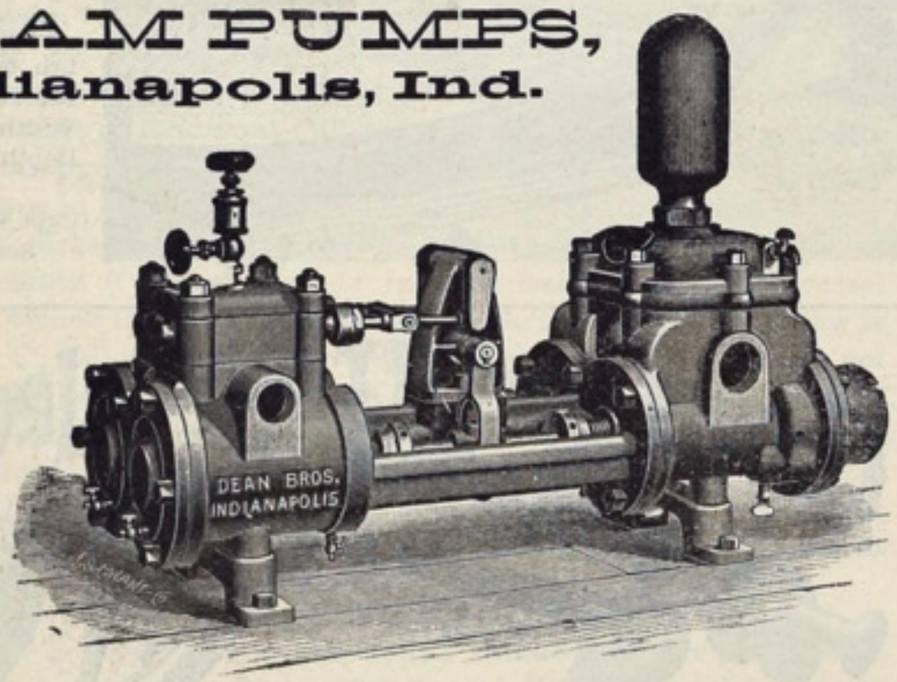

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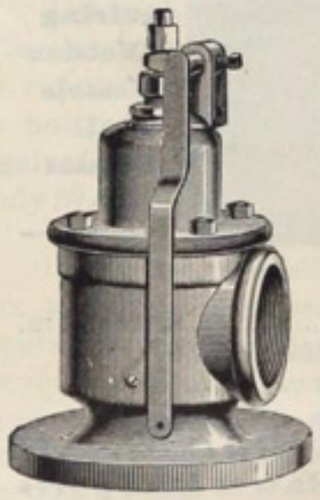

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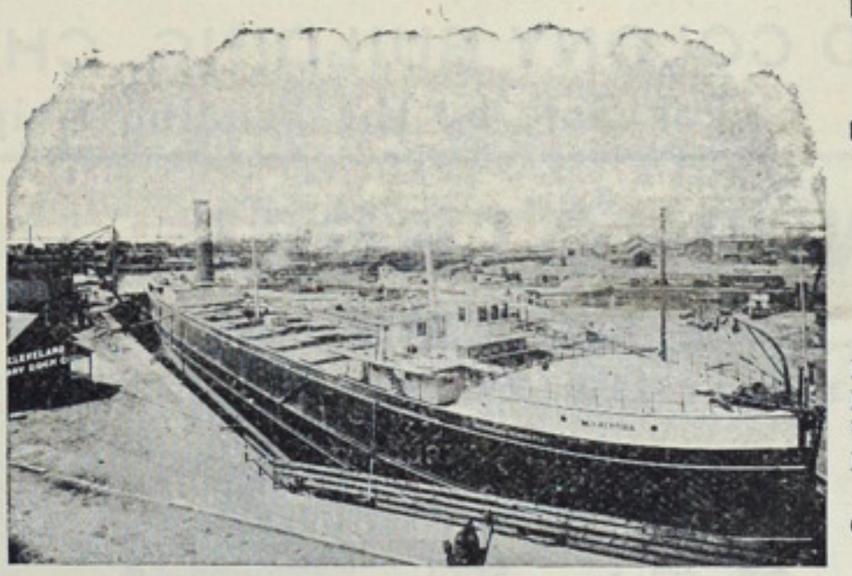

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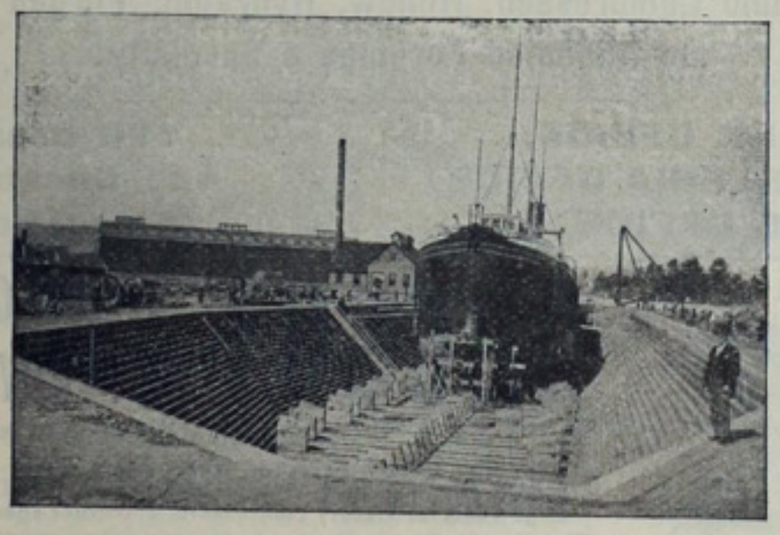

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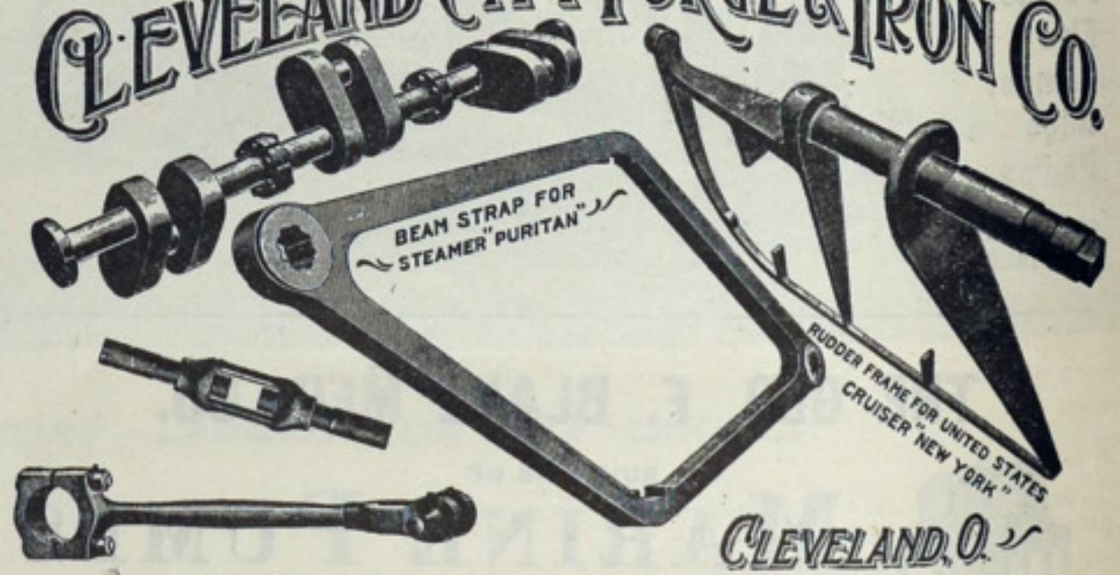

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